THE ORCHID ALBUM.

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THE

ORCHID ALBUM,

COMPRISING

COLOURED FIGURES AND DESCRIPTIONS

OF

NEW, RARE, AND BEAUTIFUL

ORCHIDACEOUS PLANTS.

CONDUCTED BY

ROBERT WARNER, F.L.S., F.R.H.S.,
AUTHOR OF SELECT ORCHIDACEOUS PLANTS,

AND

BENJAMIN SAMUEL WILLIAMS, F.L.S., F.R.H.S.,
AUTHOR OF THE ORCHID GROWERS' MANUAL, ETC.

THE BOTANICAL DESCRIPTIONS BY THOMAS MOORE, F.L.S., F.R.H.S.,
CURATOR OF THE CHELSEA BOTANIC GARDEN.

THE COLOURED FIGURES BY JOHN NUGENT FITCH, F.L.S.

VOLUME IV.

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DEDICATED

BY SPECIAL PERMISSION

TO

H.R.H. The Princess of Wales,

BY

HER ROYAL HIGHNESS'

Very obedient and humble Servants,

ROBERT WARNER,
BENJAMIN S. WILLIAMS.

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J.Nugent Fitch del.et lith.

PAPHINIA GRANDIS.

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PAPHINIA GRANDIS.

[Plate 145.]

Native of Brazil.

Epiphytal. *Pseudobulbs* clustered, small, ovate, angular, furrowed, about one and a half inch high, and of a shining green colour. *Leaves* short, eight to ten inches long, plaited, sub-membranaceous in texture, elliptic-lanceolate, acuminate, of a pale bright green, with one or two short scales at the tapered base. *Peduncles* pendent, springing from the base of the pseudobulbs, about three-flowered; bracts ovate pointed. *Flowers* large, measuring seven inches each way, semi-expanded, with a lip of remarkable form; *dorsal sepal* ovate-lanceolate acuminate, one and a half inch broad, the lower half of a creamy white, with irregular narrow transverse bands of chocolate-purple, the upper half wholly chocolate-purple, excepting a narrow border of creamy white; the *lateral* ones somewhat oblique, less fully and less regularly banded, but freely broken up into transverse patches, and margined with creamy white; *petals* about the same size and form as the sepals, but more narrowed towards the base, marked similarly to the dorsal sepal, but with finer and narrower bands of chocolate-brown, set more concentrically, small at the base, larger upwards, the upper half wholly chocolate-purple, with creamy white edge; *lip* shorter than the sepals and petals, somewhat obovate in circumscription, with a blackish purple claw widening into an oblong-obovate cream-coloured disk, from which proceed a pair of bluntly-linear incurved side lobes half an inch long, and of a pale chocolate-brown; then becoming much constricted, the middle or front lobe furnished with two prominent laterally spreading black-purple acute falcate recurved teeth, and terminating beyond these in a roundish knob covered with a bunch of long shaggy cream-coloured hairs. *Column* green, spotted with purple, the apex yellow, with a long prominent rostellum.

Paphinia grandis, *Reichenbach fil. MS.*

This genus of Orchids has curiously formed flowers, and is altogether very distinct in aspect and character. There are but few species known in cultivation, and this *Paphinia grandis*, which we now figure, is the finest we have seen, the flowers being much larger than those of *P. cristata*, which we figured at Plate 34 of our first volume. Since then this rare and fine species has produced its blossoms in the collection of W. Williams, Esq., Sugnall, Eccleshall, Staffordshire. The plant was a well-grown one, and the flowers large and very peculiar, as will be seen by our representation—indeed, the flower, when received for our Artist to figure, was quite a surprise to us.

Paphinia grandis is similar in its manner of growth to *P. cristata*, but is of more vigorous habit. The pseudobulbs are green and shining, and the leaves light

green and plaited, about ten inches high. The flower scapes are produced from the base of the pseudobulbs after they have completed their growth, the young pseudobulbs being developed when the flowering is over. The flowers are large and dependent, very quaint both in form and marking, the sepals and petals being of a dark reddish purple, barred and margined towards the base with pale creamy yellow, while the lip is deeply fringed and of a creamy white colour at the apex, the remaining portion being beautifully coloured with red and dark brown; the column is of a bright green, tipped with deep yellow. It blooms during October and November, and lasts in beauty about ten days.

This plant is found established on the branches of trees in the warmer parts of Brazil, where there is also a great deal of moisture during the growing season, while in the drier season the supply being limited they become withered; but as soon as the rainy season recommences they plump up, and show signs of flowering, and afterwards make their new growths.

We find a warm moist house to suit the Paphinias, which should be grown in pans and suspended as near the roof as possible. The leaves being thin in texture, the plants require shading from the burning sun, which soon scorches them, and prevents them from performing those functions which are essential to their well-being. In fact, the maintenance of the foliage in a perfect condition is the means of securing good bulbs, and insuring good spikes of bloom. The pans they are grown in must be filled three parts full of charcoal and crocks, then a layer of sphagnum moss mixed with rough fibrous peat and charcoal should be put in, and on this the plant set so as to be elevated above the pot rim, filling up with the peat and a few lumps of charcoal, among which the roots will work freely. It requires a liberal supply of water during the growing season, and by having the soil kept well open with good drainage the water will pass off quickly and not become stagnant. There are more plants injured by bad potting material and bad drainage than most persons imagine.

After the growth is completed, merely give sufficient water to keep the bulbs plump until they begin to show signs of flowering and making their shoots; then as the growth progresses, more may be given. They should always be suspended near the light, and when a suitable place has been found for them, it is well to keep them in it, as the cultivation of this plant is not so easy as that of some others. If, however, care and attention are bestowed on them they may be made to thrive. We were some time before we got our plants of *P. cristata* to do well, but we tried them in pans suspended near the glass in a warm house, and they are now no trouble. They have been in the same house for three years, and continue to make fine bulbs and to bloom freely. The *P. grandis* requires the same mode of treatment.

J.Nugent Fitch del.et lith.

LÆLIA ANCEPS HILLIANA.

B.S.Williams Publ.

LÆLIA ANCEPS HILLIANA.

[Plate 146.]

Native of Mexico.

Epiphytal. *Pseudobulbs* ovate or oblong-ovate, compressed, angulate, clustered, monophyllous or diphyllous. *Leaves* lanceolate oblong-acute, six to nine inches long, smooth, leathery, channelled at the base. *Scape* at the apex of the pseudobulb, from between the folded leaf-base, a foot long, two-edged, almost covered with long carinate semi-sheathing bracts, larger upwards, pale green tinged with red. *Flowers* large, two or three at the apex of each scape, white, with a charming blush-tinted lip; *sepals* lanceolate, two to two and a half inches long, the dorsal one somewhat longest, white, half an inch wide, the lateral ones channelled; *petals* ovate-lanceolate, an inch wide, spreading, white; *lip* two inches long, three-lobed, the side lobes folded over the column, and spreading at the subacute apex, where they are of a pretty blush-pink, the tubular portion just tinted outside with pale yellow; throat or disk furnished with two deep yellow ridges, separated and bordered by three red lines, extending across the whitish portion at the base, and having recurved hairs spreading from the two lateral ones; front lobe an inch long, recurved, acute, mucronulate, yellowish white at the base, the anterior two-thirds of a delicate blush-pink. *Column* enclosed, green at the tip.

Lælia anceps Hilliana, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xv., 169; *Id.*, xix., 342.

Our drawing of this pretty novelty was taken from a fine plant in the collection of C. J. Hill, Esq., Arnott Hill, Nottingham, after whom it is named, and who has been a cultivator of Orchids for many years. Mr. Hill has also some other rare species in his collection.

The group of *Lælias* to which this plant belongs has now become somewhat numerous, and among them are several new white forms, which have been sent home by our energetic collectors. They have been trying to procure these for a long time—indeed, since the period when *Lælia anceps Dawsoni* was imported by the Messrs. Low & Co. Since then many have been sold under that name, which have turned out to be nothing more than the old *L. anceps*, and this has naturally caused great disappointment. It would appear that the *Dawsoni* variety cannot now be found, but the perseverance of our collectors has brought to light other beautiful white forms, which have been found in great masses, and these make a splendid contrast with our old favourite, the typical *L. anceps*, which has bloomed and decorated our Orchid houses and stoves during winter for many years. Of late we

have obtained some superior varieties as regards colour, although it is difficult to surpass the original, of which a fine specimen, bearing a very large number of flower-spikes, was flowered by the Comte de Germiny, Chateau de Gouville, near Rouen, France, last year. It was a glorious sight, for when plants are in such vigorous health the flowers are always large and good in colour.

Lælia anceps Hilliana is a compact growing evergreen plant, in this resembling the type, and it produces its flower-spikes in a similar way and at the same time. The sepals and petals are white, the lip delicate rose with a yellow crest, and the throat veined with dull purple. It flowers during January, February, and March, each specimen continuing in beauty for two weeks. It requires the same treatment as *L. anceps*, and will thrive either in a pot or basket suspended from the roof, or placed as near the light as possible; just enough shade may be given to keep the foliage from burning.

We find these plants do well in fibrous peat and good drainage. The plant should be well elevated above the pot or basket, so that the roots may either find their way into the material or over the surface. It is always pleasing to see them throw their new roots outside as if they enjoyed their liberty; and it is certainly more natural for them to do so, as they are found on trees growing outside the forests, where they enjoy a free circulation of air, and also receive the heavy dews that collect at night, some of the moisture being doubtless stored about them to help them through the hot days of the dry season, which is their resting period. Then, when the rains come, they start and flower, afterwards making their growth for the next season; it is this succesion of seasons we must endeavour to imitate as closely as possible.

These *Lælias*, then, are of easy culture if we do but study their wants. We find the Cattleya house the most suitable position for them, and give them a good supply of moisture at the roots when in vigorous growth, reducing the quantity supplied when the growth is completed, and until the plants begin to flower. When the blooming season is over, they will begin to push out fresh growths, and this is the best time to repot them if they require it; if not, they will be benefited by a little top dressing, which may consist in removing some of the old soil, and applying new material, into which the roots will work more freely.

GRAMMATOPHYLLUM FILLSII.

GRAMMATOPHYLLUM ELLISII.

[Plate 147.]

Native of Madagascar.

Epiphytal. *Pseudobulbs* tufted, clavate-fusiform, compressed, marked towards the apex by the scars of the fallen leaves, and invested at the base by pale brown membranaceous bracts. *Leaves* numerous, produced from the apex of the bulbs, deciduous, broadly lorate obtuse. *Scape* radical, pendulous, bearing a broad raceme of showy blossoms of very curious form. *Flowers* numerous, yellow and reddish brown, twelve or more collected into a raceme, with pedicels one and a half to two inches long, each having a linear acute loose pallid green bract at its base; *sepals* ovate from a broad base, shortly acuminate, contorted, the dorsal one bent forwards, and having its sides turned up, the lateral ones gibbous at the base, spirally twisted, tawny yellow outside marked closely with transverse spottings of deep brown, inside of a brighter yellow, with more regular thickly-set transverse lines of bright reddish-brown, which become consolidated into a broader stripe near the apex; *petals* oblong, twisted, half as long as the sepals, yellow at the base, with the spreading tips longitudinally streaked with red-brown for half their length; *lip* as long as the petals, sacculate at the base, three-lobed, with a stout median rib, separating beyond the isthmus into three short slender ridges, whitish, the ovate front lobe streaked with reddish purple and bent down on the basal half. *Column* incurved, the anther crested with a small pedicellate tubercle.

Grammatophyllum Ellisii, *Lindley*, in *Botanical Magazine*, t. 5179; *Flore des Serres*, t. 1488; *Bateman, Second Century of Orchidaceous Plants*, t. 176.

Grammangis Ellisii, *Richenbach fil.*, in *Hamburger Gartenzeitung*, xvi., 520; *Id. Xenia Orchidacea*, ii., 17.

This is one of the most distinct of Orchids. It was brought home in 1859, by the late Rev. W. Ellis, of Hoddesdon, Herts, to whom we are indebted for the introduction of some other good plants from Madagascar, and in whose honour it is named. At that time it was a difficult matter to get the plants home in a living state, the transit service being very different to that of the present day. *Grammatophyllum Ellisii* is still rare; we believe it has been re-imported by Messrs. Low & Co., of Clapton, at whose establishment our artist made the drawing from which our present illustration is derived.

Grammatophyllum Ellisii is a plant of deciduous habit, producing distinct-looking fusiform bulb-stems, and bearing foliage of a lively green colour. The drooping racemes which are many-flowered, are produced from the base of the bulbs at the same time they are making their young growths. The sepals and petals are of a

greenish yellow, the interior surface being almost entirely covered with small brown linear spots, becoming denser and coalescent towards the tips, the petals pale yellow tipped with reddish purple, and the lip white and purple. It blooms in July and August, and lasts some time in a perfect state of flowering provided it is kept dry.

This species will thrive well in the East India house, grown in a pot or basket with rough fibrous peat on sphagnum moss, and with sufficient drainage for the water to pass off, in order that it may not become stagnant, and thus detrimental to the plant. Clean pots are very essential as well as clean drainage, and all the materials used should be good and sweet. Cleanliness is one of the most essential points in plant culture, as may be observed by all who have anything to do with them. At Orchid sales one often meets with a collection to be sold which is in a most deplorable state, the sight of which is bad enough to make a faint-hearted grower give up Orchid culture altogether; they are perhaps badly potted besides, and in such a rough state as to greatly depreciate their value. The same subjects if they were clean, neatly potted, and well grown, would generally realise a fair price, as well as afford pleasure to those who admire clean and well grown plants. Orchids require all the brightness one is capable of bestowing on them, especially when not in bloom. Those who prize their plants, and are acquainted with the different kinds, like to have their Orchid houses well arranged and kept in perfect order, the floors and stages well cleansed, and all rubbish studiously cleared away, as this is an inducement for insects—especially such as cockroaches and woodlice, which are terrible pests—to make their appearance, and to increase and multiply.

Mr. Brymer's Cattleyas.—We have received a fine series of *Cattleya* flowers from W. E. Brymer, Esq., M.P., Ilsington House, Dorchester, consisting of some grand varieties of *C. Mossiæ* and *C. Mendelii*. One variety of *C. Mossiæ* was the darkest-coloured form we remember to have seen, the sepals and petals were very high-coloured, and the lip similar to that of *C. Mossiæ Hardyana*, figured at Plate 125 of our third volume; this had three flowers on the spike. *C. Mossiæ aurea* was also charmingly represented by a fine well-formed pair of flowers. *C. Mendelii* had four flowers on the spike, and a fine large variety it was. *C. Warneri* had three flowers on the spike, the flowers of a very rich colour, and of fine form. Mr. Brymer exhibited a wonderful specimen of *C. Skinneri* at the Royal Botanic Society's Show, Regent's Park, on May 21st, 1884, which was deservedly awarded the Veitch Memorial Prize for the best Orchid in the Show. The plant was fully three feet in diameter, and had about twenty-two flower-spikes, the spikes bearing on an average six flowers each. Great credit is due to Mr. Powell, the gardener, for the way in which he has cultivated this most difficult plant.—B. S. W.

J. Hugenin Fitch del. et lith.

BARKERIA CYCLOTELLA.

B.S. Williams Publ

BARKERIA CYCLOTELLA.

[Plate 148.]

Native of Guatemala.

Epiphytal. *Stems* short, erect, leafy, as thick as a quill, springing from a creeping rhizome. *Leaves* ligulate-oblong acute, distichous, clasping the stem at the base, of a light green colour. *Scape* terminal, erect, slender, reddish, about a foot high, with a few sheathing pallid whitish brown striate bracts, surmounted by a raceme of about six flowers, which have slender purple-red pedicels one and a half inch long, with short membranaceous triangular acute bracts at their base. *Flowers* spreading, about two inches across, richly coloured and very handsome; *sepals* lanceolate acute, spreading, about an inch long, entire, of a rich deep magenta, the dorsal one projected forwards; *petals* ovate, twice as broad as the sepals and about the same length, acute, deep magenta; *lip* broad, roundish, entire, emarginate, narrowed suddenly at the base, the disk white, with a broad even margin about one-fourth of an inch wide of deep magenta, and having a tapering pointed crest running out beyond the tip of the adnate column towards the apex of the lip. *Column* adnate to the base of the lip, broad upwards, deep magenta on the exposed side, about one-third the length of the lip, the slightly-winged edge and under side white.

Barkeria cyclotella, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s. xiii., 72.

The genus of which we here picture a representative is a most beautiful one, and there are among its members some charming species with bright coloured flowers, such as *Barkeria Skinneri* and others. *B. spectabilis*, with its most beautiful rosy pink blossoms dotted with crimson, forms a nice contrast to this highly coloured plant, of which there are many varieties, varying both in size and colour. We exhibited a specimen of *B. Skinneri* nearly forty years ago at the Regent Street meetings, and Dr. Lindley awarded it a Silver Banksian Medal. When Mr. Skinner was sending home Orchids these plants were more numerous, and they were then well cultivated.

The *Barkerias* are plants of which we require large importations every few years, but we have known specimen plants to be cultivated and kept in order for several seasons. They require to be grown in a cool airy house, with all the light and sun that can be given them, as they naturally grow in exposed situations.

We are indebted to F. A. Philbrick, Esq., Q.C., of Oldfield, Bickley, who grows these Barkerias well, for the opportunity of figuring the present beautiful species. This gentleman has favoured us with some remarks giving his own experience, which, with his permission, we gladly introduce, that our readers may be profitably

guided by it. Mr. Philbrick writes:—"In *Barkeria* culture air is everything; the fullest freest circulation, no *shade even* in the hottest sun, but full in its rays—the more sun the better. When growing, keep watered, dipped over head as often as you can. I often dip mine *myself* (they hang in an old vinery facing due south, at an end where no vines are) and put them back into full sun dripping wet; they like this, extraordinary as it sounds. I get sturdy growth and red-brown foliage. But, then, the plant is a true rambler; no pot or basket holds it, it is best on a branch of wood suspended in a basket, roots outside, and hanging down freely; hence you can treat it as I suggest.

"In a common Orchid house, especially if with *no air on at night*, 'it living doth languish, and languishing doth die.'

"I grow it as described from after the flower spikes are cut or over till they are coming on in November again, and then move it to cool end of Cattleya house to flower, and take back directly flowering is finished to the cold vinery, *i.e.*, frequently 45°, never over 51°. The plant I gave you a spike of bore two, the finer one I kept, as it opened later than that I gave you. They keep five to six weeks in beauty."

Barkeria cyclotella is a deciduous plant, and produces its flower spikes from the top of the stems at the time they are making their growths. The blossoms are of a magenta-purple colour, and are produced during February and March, lasting some six weeks in bloom.

Sobralia macrantha.—Mr. Heims, gardener to F. A. Philbrick, Esq., Q.C., exhibited at the First Summer Show of the Royal Botanic Society, a wonderful specimen of this beautiful and much neglected Orchid. The plant bore about two dozen large fresh flowers. It is many years since we have seen this Orchid so well exhibited.—B. S. W.

EPIDENDRUM ATROPURPUREUM.

EPIDENDRUM ATROPURPUREUM.

[Plate 149.]

Native of Guatemala, Panama, and Colombia.

Epiphytal. *Pseudobulbs* broadly ovate, clustered, about the size of a pigeon's egg, becoming wrinkled when old, di-tri-phyllous, evergreen. *Leaves* ligulate-oblong, somewhat coriaceous, acute, channelled. *Scape* issuing from the apex of the pseudo-bulb, longer than the leaves, erect, 7—8-flowered, with a small triangular dark brown bract at the base of each of the pedicels. *Flowers* measuring about two and a half inches across each way; *sepals* obovate-oblong, all more or less incurved at the tip, the dorsal one most so, and all narrowed towards the base, where they are of a pale watery green, the rest of the inner surface, except the extreme tip which is green, being of a dark chocolate brown, the exterior surface greenish, stained with brown; *petals* similar and of the same colours, but somewhat more narrowed at the base and slightly twisted; *lip* prominent, three-lobed, the lateral lobes embracing the column, their ovate acute extremities extended and reflexed, the middle lobe large, flat, roundish-flabelliform, white, with a feathered crimson spot at the base in front of the flattened fleshy disk. *Column* whitish, triangular, appressed to but distinct from the lip, the anthers yellow.

Epidendrum atropurpureum, *Willdenow, Species Plantarum*, 115,—f. Rchb.; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 344.

Epidendrum macrochilum, *Hooker, Botanical Magazine*, t. 3534; *Morren, Annales de Gand*, 1846, t. 86; *Lindley, Folia Orchidacea*, art. Epidendrum, No. 79.

Epidendrum auropurpureum, *Lindley, Genera and Species of Orchidaceous Plants*, 99,—f. Rchb.

Cymbidium cordigerum, *Humboldt & Kunth, Nova Genera Plantarum*, i. 341, —f. Rchb.

The *Epidendrums* form a very large genus, among which rank some exceedingly beautiful species; some, indeed, of them which have come under our notice are inferior to others in regard to their flowers, but there are those who like to cultivate them on account of their fragrance, which gives them an especial value in an Orchid house, and also when cut and mixed with other flowers. They do not like much shade, and therefore grow well on blocks of wood suspended near the glass, and as they flower in drooping panicles such a position suits them admirably.

The species we are now figuring is one of the most beautiful, and there are also other good kinds which we hope to introduce at some future time. Some of them have most brilliant colours, as an example of which we may refer to *Epidendrum vitellinum majus* figured in our first volume, while *E. bicornutum* is a chaste pure white, for which we hope to find a place in the present volume.

Of the fine plant now illustrated, there are two distinct varieties: one having a white lip with a crimson spot as figured in our plate, and in those quoted above; the other, most commonly known in gardens as *E. macrochilum roseum*, having a pretty rose-coloured lip, as figured by Bateman in his splendid *Orchidaceæ of Mexico and Guatemala*, by Reichenbach in *Pescatorea*, by Paxton in the *Magazine of Botany*, and by Van Houtte in the *Flore des Serres*. Both forms are exceedingly beautiful.

We are indebted to Baron Schröeder for our present figure, the drawing for which was made by our artist from a plant in the grand collection cultivated at The Dell, Staines.

Epidendrum atropurpureum is an evergreen plant with pear-shaped pseudobulbs of a light green colour. The foliage grows about ten inches or a foot high, and the flower-spike proceeds from the top of the pseudobulb during the winter and spring months after the bulbs have completed their growth. The sepals and petals are of a deep reddish purple, and the lip is white, with a distinct purple-crimson blotch in the centre; it continues in bloom for several weeks and is worthy of a place in every collection, for, as Mr. Ballantyne says, it is most useful and takes up so little room.

This plant will do either in a basket or on a block suspended near the light, and slightly shaded from the burning sun. It is found growing in exposed situations, and the bulbs require to be well matured in order to induce them to bloom freely. If grown in baskets the material we recommend for the roots is good fibrous peat and sphagnum moss, with good drainage. They require but little soil, but they seem to enjoy a few lumps of charcoal on the surface of the peat. If grown on blocks some live sphagnum moss applied during the period of active growth helps to keep them moist about the roots during warm weather when their growth is progressing; the blocks must be syringed every day in hot weather. The Cattleya house is the most suitable locality for them. When the plant is found to be doing well and rooting freely, do not on any account disturb it, as it dislikes being cut, and if the back bulbs are cut they seldom break or do any further good. Some Orchids will stand being disturbed, while in other cases it causes them to dwindle away.

Cattleya Mossiæ Pottsii.—This is a most lovely variety of an old favourite, and was bloomed in June this year by Arthur Potts, Esq., Hoole Hall, Chester, after whom it is named. We must congratulate Mr. Potts on being so fortunate as to bloom such a gem. The flower is about seven inches in diameter, the petals being broad and flat, blush, beautifully feathered in the centre with a broad band of magenta-purple of a most irregular form; the sepals are irregularly marked in the same way; the lip is large and broad, deep magenta-purple, broadly margined with blush white, and with a yellow throat. The effect of the pale margin of the lip against the deep colouring of the segments is most charming.—B. S. W.

J. Nugent Fitch del. et lith.

CATTLEYA TRIANÆ SPLENDIDISSIMA.

B.S. Williams Publ.

CATTLEYA TRIANÆ SPLENDIDISSIMA.

[Plate 150.]

Native of New Grenada.

Epiphytal. *Stems* oblong club-shaped, furrowed, the lower parts enveloped in pallid membranaceous sheaths. *Leaves* solitary, coriaceous, ligulate-oblong obtuse, emarginate, pale green. *Scape* two-flowered, issuing from a pale brownish yellow oblong spathe or sheath three inches long. *Flowers* large, measuring six inches across, splendidly coloured; *sepals* lanceolate, entire, recurved, white, with the slighest possible flush of grey; *petals* of the same colour, three inches long and two and a half inches wide, broadly ovate, neatly undulated, and toothed towards the apex; *lip* three inches long and nearly two inches wide, the tubulose base formed by the infolding of the sides, blush deepening to magenta towards the front, the inside also blush with a large bilobed recurved patch of deep golden yellow, the front portion roundish and bipartite, the whole surface close up to the yellow curves rich crimson-magenta extending to the margin, which is neatly and conspicuously but not excessively undulated. The brilliancy of the colour is very striking.

Cattleya Trianæ splendidissima, *supra.*

There is no doubt that the class of *Cattleya Trianæ* is becoming a very numerous one and many of the sorts are extremely beautiful and very different from the original type. There have been frequent importations of late and among them are many distinct and well coloured forms: in fact, there is such an endless variety of them that it is sometimes difficult to know what to do. We, however, purpose to figure the most distinct kinds. It is, we think, a most extraordinary fact, that but few plants of these better kinds turn up in the numerous importations. The species abounds in different localities, in some of which only poor pale varieties of little value are found, while in others there are many good forms of brilliant colours, possessing also fine form and substance. There are some varieties which we named fifteen years ago or more, that we have not seen equalled in colour, form, and substance, taking all these good qualities into account; still there is little doubt that our energetic collectors may find some that will put in the shade those we have already spoken of; there may, indeed, be some such now in other collections which we have not seen.

Our present plate was taken from a specimen with many flowers which was bloomed in the Victoria and Paradise Nurseries. This, when shown at the meeting of the Royal Horticultural Society, South Kensington, was unanimously awarded a First-class Certificate. The plant is now in the possession of Baron Schröeder who has large specimens of some of the most splendid forms of this Trianæ group. There was a grand display of them at The Dell when they were in blossom.

Cattleya Trianæ splendidissima is a compact evergreen plant, with pseudobulbs and foliage about eighteen inches in height. The sepals and petals are pure white, of fine form and substance; and the lip is of a brilliant magenta, the colour being carried well to the margin, while the throat is deep orange. It is a very attractive variety, flowering in February and March, and lasting six weeks in beauty. This, like others of the Trianæ section, requires good fibrous peat and also good drainage; it grows well with *C. Mossiæ* and others. As soon as the flowering season is over the plants begin to start into growth, which should be encouraged so that they may make strong sound pseudobulbs, and have them well ripened for the next season, as they bloom early in winter, when flowers are in request.

Whit-week Exhibition at Manchester.—We often hear individuals expressing their astonishment, that the Exhibition of Orchids, at Manchester, is always better than elsewhere. The answer to this is, that the Council of the Royal Manchester Botanical Society are gentlemen who have made it their study to induce exhibitors to bring their specimens from far and near, by building a fine Exhibition House for the safety and accommodation of these valuable plants. For example, we have taken *Cattleyas*, *Lælias*, *Odontoglossums*, &c., in full blossom to this exhibition, and after the week's show, travelling 400 miles, loading and reloading, they have arrived home quite fresh and unhurt. The flowers were opened in their usual houses, not forced for the show as is often the case. This system of forcing is, however, the cause of many of them fading so quickly, while those which are opened in their proper temperature travel best, and are not so liable to be injured, especially in such a house as is provided for them at Manchester. Mr. Findlay does all in his power to preserve the specimens sent there, and the result is that exhibitors, knowing that their valuable specimens are safe, do not hesitate to trust them at the show.

We may truthfully state that the show of the present year was the grandest display of Orchids we ever saw; and we feel sure our readers will be glad to have some account of the wonderful specimens that were staged, so we will note a few of the most worthy of them. R. P. Percival, Esq., of Southport, exhibited the finest single specimen, that has ever come under our notice, of *Cattleya Mendelii*, bearing fifty of its richly-coloured flowers, the sepals and petals being of a light rose, the lip rich magenta. Next to this was a most magnificent specimen of *Lælia purpurata*, bearing eighty fully expanded flowers, having the sepals and petals white, the lip rich crimson, and of fine form; this plant was imported about two years ago, and Mr. G. Beddoes has lost no time in bringing it to perfection. *Cattleya Mossiæ* was also a marvellous specimen, and there were many other fine plants in Mr. Percival's collection. J. Broome, Esq., exhibited a wonderful plant of *Vanda teres*, with more than one hundred and fifty expanded flowers of good colour; the plant stood about four feet high. Next to this, Dr. Ainsworth exhibited a magnificent mass of *Phalænopsis amabilis*, three feet high, and as much through, having many flower-spikes, on which were two hundred and forty of its pure white blossoms.

[*For continuation, see under Plate 152.*]

J.Nugent Fitch del.et lith.

ODONTOGLOSSUM CIRRHOSUM.

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ODONTOGLOSSUM CIRRHOSUM.

[Plate 151.]

Native of the Ecuadorean Andes: Mindo, etc.

Epiphytal. *Pseudobulbs* elongate oblong, narrowed at the apex, two to three inches long, compressed, two-edged, monophyllous, with one or two pairs of accessory leaves sheathing the base of the bulb, evergreen. *Leaves* ligulate oblong acute, channelled at the base. *Scape* radical, springing from the axil of one of the accessory leaves, bearing a spreading or somewhat drooping raceme or panicle of numerous flowers, each flower having an ovate bract at the base of its pedicel. *Flowers* large, but starry, the long narrow sepals, in fair-sized flowers, expanding to a breadth of four inches and a depth of five inches, white, thickly spotted with bright chocolate-purple; *sepals* narrow lanceolate acuminate, the dorsal one two and a half inches long, and less than half an inch broad, slightly undulated, lengthened out to a slender attenuated recurved or cirrhiform point, marked with numerous unequally disposed moderate-sized spots of bright chocolate purple, the back of the flower faintly spotted, and the base narrowed down to its point of attachment; *petals* similar in size and general form, but rather shorter, more expanded at the base, and more undulated at the margin, similarly marked, or with a few of the spots near the base smaller; *lip* shorter, with the side lobes curving round the column, the expanded front portion heart-shaped, with the upper edges spreading, and the long caudate apex directed downwards, the spreading sides marked with several (6—8) veins of deep crimson, the rest bright yellow, excepting the elongated tail-like apex, which is white, spotted with chocolate-purple like the other parts of the flower; on the disk there is borne a crest of two prominent ascending yellow horns. *Column* trigonous, short, bearing **a pair of cirrhi at the apex, whence the name.**

Odontoglossum cirrhosum, *Lindley, Genera and Species of Orchidaceous Plants*, 211; *Id., Folia Orchidacea*, art. Odontoglossum, No. 5; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi. 827; *Id., Gardeners' Chronicle*, N. S., v. 501, 503, figs. 91, 92; ix, 181, fig. 33; *Illustration Horticole*, t. 301; *Floral Magazine*, N. S., t. 222; *Williams, Orchid Grower's Manual*, 5 ed., 231, with figure.

Odontoglossum cirrhosum is one of the prettiest of the small-growing Odontoglots, and one that varies a good deal, but all the forms are useful for cutting and decorative purposes. Our plate represents a very beautifully spotted variety, and resembles the one we first flowered when the species was newly imported. There is a variety with larger flowers, which is called *O. cirrhosum Klabochorum*, and a beautiful variety it is. The species has been imported in large quantities, and is most useful for small houses, as the cultivator may grow a good quantity, and it may be bought at a cheap rate. There is a strong-growing form which throws up tall panicles of flowers, but as this variety does not produce so many flowers, and as it takes up more room, it is consequently not of the same value for decorative

purposes and disappointing to those that grow it, this kind, which may easily be picked out by those that have grown it, should be avoided. The accompanying figure was taken from a specimen which flowered in the collection of C. W. Newman, Esq., Wyncote, Allerton, Liverpool. There are some good Orchids grown here by Mr. Newman, who, however, does not profess to keep up a collection of them, but they are cultivated along with other stove plants, amongst which are some of the finest-grown specimens to be found in the North of England, Mr. Mease, the gardener, being most successful in carrying off the leading prizes at the Liverpool Exhibitions.

Odontoglossum cirrhosum is an evergreen species, of a compact habit of growth, with light green foliage. It produces branching panicles of flowers, from two to three feet in length, at different times of the year according to the period of the completion of the growth of the pseudobulbs. The sepals and petals are white, heavily spotted with blotches of chocolate-purple, and the lip is marked with the same colours, and also stained with yellow at the base. This plant was flowering in November and December. The flowers last for several weeks in beauty.

This plant requires the same treatment as *O. Alexandræ.* We grow the two in the same house, and they associate well together, their graceful drooping masses of blossom overhanging the green foliage; while the flowers of *O. Alexandræ* and other kinds, such as *O. triumphans, O. Hallii* and its varieties, form a pleasing contrast of colour which is always to be admired. They will thrive well in baskets, and when grown in this way their drooping habit produces a pleasing effect. Most persons grow them in pots, with rough peat and sphagnum moss, but they must have good drainage, as they require a bountiful supply of water during the summer season; in fact, they like to be kept moist at the roots the whole year round. They make their growth after flowering, and as there will always be some growing, they will bloom at different times of the year.

Odontoglossum nævium majus.—Mr. Stevens, gardener to W. Thompson, Esq., Walton, Stone, Staffordshire, has forwarded us a grand branched spike of this most rare and beautiful Orchid. The spike sent had thirty-three flowers upon it, and Mr. Stevens informs us that the pseudobulb which produced this spike also had another one with seventeen flowers. This is very distinct from the plant we so often see named *O. nævium majus*, but which is in reality *O. gloriosum.* Accompanying this was a spike of *Odontoglossum Alexandræ Thompsoni*, a splendid spotted variety with pure white petals, having a large irregular crimson-purple blotch in the centre, whilst the petals are pale rose and heavily blotched with the same colour; a very distinct and handsome form.—B. S. W.

DENDROBIUM CRASSINODE.

DENDROBIUM CRASSINODE.

[Plate 152.]

Native of Arracan, Burmah, Siam, etc.

Epiphytal. *Stems* numerous, tufted, erect or ascending, four to ten inches high, slender at the base, thickened upwards, nodose, the nodes or joints covered on the upper half with a scarious appressed scale, somewhat crowded and swollen so as to become depressed-spherical, fully twice the thickness of the contracted internodes, and slightly grooved. *Leaves* ligulate acute, sheathing at the base, deciduous, falling away from the ripened shoots before the development of the flowers, leaving the swollen joints bare. *Flowers* about three inches across, very handsome, on two-flowered peduncles, furnished with oblong sheathing scarious bracts, issuing from just above the nodes; *sepals* oblong subacute, heavily tipped with soft mauve, the lower two-thirds white; *petals* rather broader, otherwise similar both in form and colouring; *lip* concave roundish-ovate, shortly clawed, the surface covered with fine velvety down, the edge minutely erose and ciliolate, furnished at the base with a deep yellow blotch three-fourths of an inch wide, exterior to which is a band of white, narrowing off towards the back, the front border being a soft mauve; *spur* or *mentum* very short and blunt. *Column* short, greenish white, with purple margins.

Dendrobium crassinode, *Benson & Reichenbach fil.*, in *Gardeners' Chronicle* 1869, 164; *Hooker, Botanical Magazine,* t. 5766.

In this remarkable genus there are many fine species and our present plate illustrates one of the most useful and beautiful of them. Moreover, the importations that have been brought home during the past few years bring it within the reach of everyone who has an inclination to grow it. A few years ago it was very scarce, and cost guineas where now it costs only shillings. It is free-growing as well as free-blooming; a flower may be plucked and placed with a small Fern frond, and a button-hole bouquet is formed at once. It may be grown in a small space suspended from the roof, which is a situation in which it delights. Our drawing was taken from a specimen in the wonderful collection of J. T. Peacock, Esq., Sudbury House, Hammersmith, where thousands of Orchidaceous plants are grown and well grown too.

Dendrobium crassinode is a native of Burmah and other parts of India, and is a deciduous species, loosing its leaves after the growth of the stems is completed. It grows from one to two feet in height, and has large swollen or knotted joints or nodes, from which it takes its name, which means thick-jointed. The sepals and petals are white, heavily tipped with rosy purple, the lip is also white, tipped with rosy purple, and having a large blotch of yellow in the throat. It blooms in March and April, and continues two or three weeks in perfection.

We find the East Indian house the most suitable for it, and it should be grown as much in the light as possible, but slightly shaded from the burning sun. The plant will do in pots or baskets suspended from the roof. The material best suited for planting it in is sphagnum moss and good fibrous peat, perfect drainage being also secured. During the warm summer weather the foliage requires syringing. Generally the plant requires just the same treatment as *D. Wardianum*, with a similar amount of moisture during the growing season; after the stems have completed their growth in Autumn they may be put in a cooler house, such as the Cattleya house. We have seen them placed in a small vinery, only just enough water being given to keep the stems plump until they begin to show flower, when a little more water was given to encourage the buds to swell, and in this way they have done well. If they are required to bloom early place them in a warmer house; and should flowers be wanted later place them in a cool house, but do not keep them too long there as the buds may damp off. If they begin to grow at the time they are blooming they should be pushed on in order to induce them to finish and ripened stems for their blooming in the following year, for unless good well-ripened stems or bulbs are secured, it is idle to expect good flowers. As regards insects, red spider and thrips attack them, and must be kept down.

Whit-week Exhibition at Manchester *(Concluded from Plate 150.)*—There were also some remarkably fine specimens from O. Schneider, Esq.: for example, *Dendrobium nobile intermedium*, with from six hundred to seven hundred flowers; also a fine *Cattleya Mossiæ*, with thirty fine flowers, and a wonderful plant of a good variety of *Dendrobium Dalhousianum*, with twenty-five flower spikes. Mr. Cypher, of Cheltenham, had a fine specimen of *D. infundibulum*, with forty flowers; also a beautiful plant of *D. Dearii*, a most useful species with pure white flowers, and other equally good plants. Mr. James, of Lower Norwood, exhibited the rare *Odontoglossum cordatum aureum*, with six spikes of creamy yellow flowers; also a good variety and fine specimen of *Masdevallia Harryana*, and a good variety of *Odontoglossum Pescatorei*, with a grand spike. Messrs. Heath, of Cheltenham, had some smaller plants of *Cattleya Mendelii* and *C. Mossiæ*, and a large specimen of *Lælia elegans*. The most wonderful *Oncidium Marshallianum* was exhibited by G. Neville Wyatt, Esq., of Cheltenham, the flowers large, and of the brightest yellow, the lip being two inches in diameter; it was a noble spike.

Messrs. Ireland and Thomson exhibited a box of fine cut Orchids, among which were good specimen flowers of *Cattleyas*, *Lælias*, *Odontoglossums*, &c. W. Leach, Esq., Fallowfield, also exhibited some fine plants. There were also many other fine specimen Orchids, which space will not allow us to mention. Suffice it to say, that this show was worthy of being seen by everyone interested in these flowers, and was a sight that will never be forgotten.—B. S. W.

Nugent Pitch del et lith

CŒLOGYNE GARDNERIANA.

B S Williams Publ.

CŒLOGYNE GARDNERIANA.

[Plate 153.]

Native of India: Nepal, Khasya, &c.

Epiphytal. *Pseudobulbs* flask-shaped, terete, somewhat furrowed, attaining six inches in length, diphyllous. *Leaves* broad lanceolate, acuminate, a foot and a half long, five-nerved, narrowed below into a long stoutish petiole. *Scape* lateral or terminal, bearing a dense nutant distichous raceme shorter than the leaves, and furnished with broad oblong cucullate bracts, the sterile ones fleshy, the floriferous ones persistent and petaloid, of a pale sienna-brown (or yellow) colour. *Flowers* two to two and a half inches long, closed, that is, having the sepals, petals, and lip connivent; *sepals* oblong, keeled, saccate at the base, white; *petals* linear-oblong acute, also white; *lip* narrow-elongate denticulate, bisaccate at the base, three-lobed, the middle lobe bifid, recurved at the tip, yellow, the lateral lobes erect, rounded at the front, white; the disk having two flexuose crests running out below the middle. *Column* semiterete, gibbous at the back below the apex, the margins bluntly winged.

Cœlogyne Gardneriana, *Lindley*, in *Wallich's Plantæ Asiaticæ Rariores*, i., 33, t. 38; *Id. Genera and Species of Orchidaceous Plants*, 41; *Id. Folia Orchidacea*, art. Cœlogyne, No. 1; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 222; *Paxton, Magazine of Botany*, ix., 73.

Cœlogyne trisaccata, *Griffith, Itinerary Notes*, 72.

This rare and charming plant is one of the most distinct of the species of *Cœlogyne*. We have known it for many years, but, at the present time, one seldom sees it in collections, which is much to be regretted. It belongs to a large genus containing many fine things, and we hope our Orchid collectors will send us more abundant materials, that we may enrich our Stoves and Orchid houses with the best and most striking of them. But though there are amongst them many beautiful species, there are some which produce diminutive flowers, and these are unattractive and uninteresting to those who are fond of showy flowers. The smaller kinds may be cultivated on blocks of wood, which are very suitable to them, since they produce pendulous spikes, which gives them an interesting aspect when grown in that way. Our present drawing was taken from a fine plant in the well-known collection of Dr. Paterson, Bridge of Allan, near Stirling, N.B., who flowers this choice species very freely.

Cœlogyne Gardneriana has dark shining green pseudobulbs, with foliage about a foot high or more. It produces its flowers on drooping spikes, the blossoms being pure white, having a pale lemon-yellow tip to the lip; and it blooms in October and

November, continuing in beauty for three and four weeks, providing it is kept free from damp in a dry part of the house, as white flowers, it is well known, so quickly spot if suffered to get damp.

We find this Cœlogyne does well grown in a pot or basket with good fibrous peat and sphagnum moss, and perfect drainage. It must be well elevated above the pot rim or basket; a few lumps of charcoal may advantageously be added to the peat. In the growing season the material about the roots must be kept moist. When the growth is completed, it should get only just enough moisture to keep the pseudobulbs in a plump state; but when the plant begins to grow, more water must be afforded it, in order to induce it to grow freely. We find it thrives well in the Cattleya house, placed as near the glass as possible, but it must be shaded from the burning rays of the sun. We mention this because we have seen the evil results of exposure, in the foliage becoming scorched by sunshine, from which cause the season's growth has been spoiled, and the plant so much weakened that often the growth for the following year is damaged. This species being very scarce, the greatest care should be taken of it.

Grammatophyllum Ellisii.—Of this grand plant, we had the pleasure to receive from E. J. Partington, Esq., Heaton House, Cheshunt, a most wonderful arching spike, bearing thirty-five fully expanded blossoms, of large size and well formed. The colour was bright, and the glossy appearance of the flowers so different from that of any other Orchid. Our readers can refer to plate 147 of our fourth volume, where a figure and description are given. Mr. Partington had this plant imported about two years ago, and we must testify that it has been well grown by Mr. Searing, the gardener. We also received, at the same time, a fine spike of *Saccolabium Blumei*, over twenty inches in length, from a specimen bearing two such racemes. We are always glad to receive such well-grown spikes, so that we can give our readers some idea of the size the spikes attain when the plants are kept in vigorous health.—B. S. W.

J. Nugent Fitch del. et lith

CATTLEYA WALKERIANA.

B. S. Williams Pinx.

CATTLEYA WALKERIANA.

[Plate 154.]

Native of Brazil.

Epiphytal. *Stems* oval-oblong, shorter than the leaves, resembling pseudobulbs. *Leaves* solitary, elliptic-oblong obtuse, marginate, mucronato-apiculate, of stout leathery texture. *Peduncles* radical, two-flowered. *Flowers* large for the size of the plant, spreading, four and a half inches in diameter; *sepals* oblong-lanceolate acute, calloso-apiculate, of a pleasing dilute magenta-purple; *petals* broadly-ovate acute, twice as broad as the sepals and of the same colour; *lip* three-lobed, the lateral lobes strongly and obliquely truncated in front, rounded at the base, enveloping half the column, dilute magenta-purple, the middle lobe transversely roundish-oblong, cuneate at the base, plain and emarginate in front, deep magenta-crimson, with the contracted claw-like base pale sulphur, the margin denticulate, the base having rugose elevated veins or crests. *Column* very broadly winged, about half the length of the tubulose base of the lip, so that the front portion is exposed, pale magenta, sometimes tinged with green.

Cattleya Walkeriana, *Gardner*, in *Hooker's Journal of Botany*, ii., 662; *Reichenbach fil.*, in *Pescatorea*, t. 41; *Lindley*, in *Paxton's Flower Garden*, t. 3.

Cattleya bulbosa, *Lindley*, *Botanical Register*, 1847, t. 42; *Paxton's Magazine of Botany*, xv., 49.

Epidendrum Walkerianum, *Reichenbach fil. MS.*; *Id.* in *Walpers' Annales Botanices Systematicæ*, vi., 416.

The plant we now bring to the notice of our readers, is one that has been grown under various names in different collections. We flowered it many years ago, and it was shown by us at the exhibitions of the Royal Horticultural Society, when Dr. Lindley called it *Cattleya Walkeriana*. It was for many years a very rare plant, but of late it has been imported by the Messrs. Low, Sander, and others, and having been sent over in large quantities, it can now be procured at a cheap rate. It is a most beautiful species, and one that takes but little room for its cultivation; it is, moreover, of easy culture if it is treated in the right way. There are different varieties to be found, varying in colour, but alike in growth. We are indebted to W. E. Brymer, Esq., M.P., of Ilsington House, Piddletown, Dorchester, for the specimen whence our drawing was taken, and which bloomed in his fine collection.

Cattleya Walkeriana is a small-growing evergreen plant, with short bulb-like stems, and light green foliage. The plant attains the height of from four to six

inches, and is of compact growth, the flowers being generally produced in pairs from a distinct radical growth, as will be seen by our figure. After it has bloomed, it produces the strong round stems which are peculiar to this species. The blossoms are large for the size of the plant, over four inches in diameter, and sweetly-scented; the sepals and petals are of a bright magenta-purple, the lip of a brilliant rosy purple, with a yellow disc. This plant flowered in December, but we have seen them blooming in February and April, according to the period of the completion of their growth, and they last four or five weeks in perfection; so that where a good many plants are cultivated, their blooming season may be much prolonged, which is a great advantage in the case of so beautiful a species.

We grow our plants in small pans, suspended from the roof of the house; and they also succeed well on blocks of wood which is natural to them, as they are found on the branches of trees in their native country, and generally in those parts of the forest where they procure all the light and sun, with the exception of a little shade during some portion of the day.

We have grown this plant in different situations and under different aspects, but we have found it succeed best when grown in a warm house with Crotons, where it gets nearly all the sun and light; this causes it to root more freely, and make better and well-ripened pseudobulbs. We have seen it grown well in a Cattleya house, placed within a few inches of the glass, with a very little thin shading during the hotter parts of the day. We believe Mr. Powell, gardener to Mr. Brymer, grows it in this way. We find it to thrive well in a small quantity of rough fibrous peat, but it must have plenty of drainage, and it delights in having some lumps of charcoal for the roots to cling to. A liberal supply of water is necessary at the roots in the growing season, but when the growth is completed, merely enough should be applied to keep the stem and leaves plump, until they show signs of growth. If cultivated on blocks, they will require more water, which must be given by syringing and by dipping the blocks in water, the latter being of the same temperature as the house in which they are grown.

Always bear in mind to keep these plants free from insects. They are subject to the white scale, which may be easily kept under by attention; these pests are often overlooked, as they are small-growing plants, and the insects are not generally so conspicuous as on the larger ones. If neglected in this way, they will not thrive.

J. Nugent Fitch del. et lith.

CYPRIPEDIUM INSIGNE.

B.S. Williams Pub.

CYPRIPEDIUM INSIGNE.

[Plate 155.]

Native of India: Sylhet, &c.

Epiphytal. *Plant* acaulescent, forming a dense tuft of evergreen foliage. *Leaves* distichous, linear-ligulate acute, channelled down the centre and clasping at the base, keeled at the back, smooth, leathery, of a pale unspotted green colour. *Scapes* erect issuing from the heart of the plant, erect, terete, downy, of a dark chocolate-purple, each bearing one flower, which issues from an ovate green spathiform bract, which is about as long as the ovary. *Flowers* large and showy, when well grown occasionally measuring five inches across from the tip of one petal to that of the other; *sepals* (dorsal) two and a half inches deep, fornicate, that is, thrown forward or overarching, oblong-obovate, wavy, emarginate, longitudinally ribbed, greenish yellow thickly dotted with brownish purple, the upper or anterior third white, the combined lateral sepals ovate greenish; *petals* spreading, linear-obovate, slightly undulated, bearded at the base, the outer surface pubescent, the inner greenish yellow, striped and slightly reticulated with tawny brown, the margin being of a clear greenish yellow; *lip* saccate, oblong, the mouth inflected and bearing an obtuse erect lobe on each side, of a deep tawny brown with greenish yellow rim. *Staminode* yellow, obcordate, glandular-pubescent with a small central boss.

Cypripedium insigne, *Wallich MS; Lindley, Collectanea Botanica*, t. 32; *Hooker, Exotic Flora*, t. 34; *Id. Botanical Magazine*, t. 3412; *Loddiges, Botanical Cabinet*, t. 1321; *Flore des Serres*, t. 1564; *Maund, Botanist*, ii., t. 56.

This old inhabitant of our stoves and greenhouses has been a friend to all growers of plants, both for its use as a decorative object in conservatories and also for cutting purposes; in fact, anyone or everyone can grow it, who has a frame or pit with glass, or a small greenhouse. If well grown it produces its flowers during the autumn and winter months, and it will stand in a warm room during the blooming season, and continue for several weeks in perfection. We do not, indeed, know of a more accommodating species in the whole Orchid family. Mr. Bruce Findlay, of the Manchester Botanic Gardens, makes a special feature of this plant during the autumn and winter months. The secret of keeping up its blooming powers is to take care of it after the flowering season is over.

The form we are figuring is a good variety of the type. There are other forms, such as *C. Maulei*, *C. Chantinii*, and *C. punctatum-violaceum*, which are more showy on account of their larger spots, but they are rare. It is with this as with all other species of Orchids, there are different varieties amongst the imported stock, but this, perhaps, varies less than do many other species. Our drawing was taken

from a fine specimen plant grown in the collection of Mrs. Heywood, Norris Green, West Derby, Liverpool, and in autumn and winter Mr. Bardney, the energetic gardener, cultivates many specimens for furnishing the conservatory, in which the grandest display is kept up with thousands of spikes of Pelargoniums, Primulas, Camellias, and other kinds of winter-blooming decorative plants, and he finds the *Cypripediums* most useful for this purpose. There are also some other good Orchids well grown in these gardens.

Cypripedium insigne is an evergreen plant with light green foliage, producing its flowers from the centre of its growth, the flower stalks being about ten inches high. The dorsal sepal is greenish yellow spotted with dull purple and orange, and tipped with white; the petals are of a pale purplish green veined with dull purple and tinged with yellow. The plant continues in bloom for six or eight weeks if kept in a warm greenhouse or conservatory.

We grow this *Cypripedium* in a warm pit during winter, after the flowering is over; in spring and summer no heat is required, but it must have plenty of ventilation during the day, the pit being closed at night. When the growths are strong they will soon show signs of flowering. When the blossoms are nearly ready to open we take them into a warmer house in order to expand their flowers to perfection, for if kept in a cool place the blooms will be much smaller. When they have finished flowering we repot them if they require it, but do not over-pot them. They require a liberal supply of water if the pots are full of roots, as they root very freely; and a little manure water applied during the growing season is a help to them, as the roots are of a fleshy texture.

We find good rough fibrous loam over two inches of drainage to suit them, if in a large pot; in smaller pots they require less. During the whole year they like to be grown near the glass, so that they get all the light possible to mature strong healthy foliage. Although, therefore, this may be considered an easy plant to grow, it requires good treatment or it will not flower freely.

J. Nugent Fitch del. et lith

B.S. Williams Pub.r

SACCOLABIUM BELLINUM.

SACCOLABIUM BELLINUM.

[Plate 156.]

Native of Burmah.

Epiphytal. *Stems* short, erect, clothed with persistent distichous pale green leaves, and throwing out aërial roots at intervals. *Leaves* evergreen, channelled, lorate acuminate, obliquely bifid at the apex, both points being entire and acute. *Peduncles* short, decurved, issuing from opposite the alternate leaves, and terminating in a compact corymb of small but remarkably elegant blossoms. *Flowers* about one and a half inch across, prettily spotted; the hollow base less deep than in *S. calceolare*, which this plant closely resembles, except that the parts are everywhere larger; *sepals* obovate-oblong obtuse, straw-coloured, with large dark brown blotches almost wholly covering the surface: *petals* oblong obtuse, straw yellow, marked with brown spots, rather smaller than those on the sepals; *lip* about an inch long, fleshy, with a semicupular basilar sac, the side lobes semi-oblong, transverse, erect, whitish, with red spots; the front lobe transversely triangular, its margins strongly serrated, and having on each side a large cushion of filiform processes; white, with a yellow central spot, and marked with bright red blotches. *Column* short, white, with mauve-purple blotches.

Saccolabium bellinum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xxi., 174.

The pretty small-growing *Saccolabium bellinum* is deserving of a place in every collection where East Indian Orchids are cultivated. It occupies but little space, and is a free-blooming species, as may be seen by glancing at the small specimen we now represent. There are several other small-growing kinds, such as *S. bigibbum*, *S. calceolare*, &c. We consider *S. bellinum* superior to those kinds, the flowers being larger and more showy, although the others are pretty and well worth cultivating.

These are very different from the large-growing kinds, such as *S. guttatum*, *S. Blumei*, and others, that produce the magnificent spikes familiar at our flower shows, and which will be figured in their turn.

Our artist made the drawing of the present species, from a plant in the well-known collection of W. Lee, Esq., Downside, Leatherhead.

Saccolabium bellinum is an evergreen species, with light green foliage, about six inches long. The long sepals and petals are yellow, heavily spotted with brown; the lip white, sac-shaped, hairy, and yellow inside, marked with purple-rose at the base. It blooms in February and March, and lasts some time in beauty.

Mr. Woolford grows this species in the East India house, suspended near the roof in a basket, with sphagnum moss and sufficient drainage. It will thrive well

on blocks of wood, or in small pans hung near the light, but shaded from the hot sun. The moss must be kept moist, as it has no fleshy bulbs to support it. There have been but few imported, and that during the last two years.

Orchids at Wilton House, Southampton, the property of H. J. Buchan, Esq. —We have often heard of this collection, and we have now had the pleasure of seeing it. Mr. Buchan's is a very pretty garden, and everything seems done well in all departments, as well, indeed, as the Orchids. There are several span-roofed houses so arranged that one can pass from one end of them to the other. We noticed some finely grown plants of *Lycaste Skinneri* and other species. *Auguloas* were well grown, and there was a fine lot of *Odontoglossums*, including many well grown plants of *O. Alexandræ* and *O. Pescatorei*, which have been blooming finely, together with well-grown specimens of *O. Andersonianum* and others. There were also fine plants of *Masdevallias* and a very fine specimen of *Epidendrum prismatocarpum* in bloom, the latter, with eleven spikes of flower, a rich dark spotted variety, which, with its light green foliage, produced a good effect. Associated with this was a good specimen of *Cypripedium superbiens* in full bloom; this is the best species of the *barbatum* section, and good plants are still rare. We further noted a good specimen of *Oncidium macranthum* showing finely for bloom, and we believe from what Mr. Osband, the gardener, told us, that it was a good form. *Oncidium Papilio*, the curious butterfly Orchid, which is always interesting, was here associated with *Odontoglossum Roezlii* and the graceful *Dendrochilum filiforme*, with its yellow drooping spikes. *Odontoglosum Alexandræ* was well represented in bloom. *Cypripedium Sedeni*, with twelve spikes of its pretty flowers, was attractive; this is a most useful species as it is nearly always blooming, for as soon as one blossom fades a new one appears. Besides the plants here mentioned, there were several other good Orchids in bloom.—B. S. W.

J. Nugent Fitch del. et lith

EPIDENDRUM BICORNUTUM.

B.S. Williams Publ.

EPIDENDRUM BICORNUTUM.

[Plate 157.]

Native of Trinidad and Demerara.

Epiphytal. *Stems* elongate, nearly a foot high, fusiform, furrowed, the younger ones leafy at the summit, the older ones marked by the cicatrices whence the leaves have fallen. *Leaves* ligulate, oblong, distichous, coriaceous, channelled scarcely striated, about four or five in number, of a darkish green colour. *Peduncles* terminal on the mature stems, supporting an erect dense raceme of about twelve (sometimes eighteen) flowers; the rachis green, the pedicels white with a small acute purplish bract at their base. *Flowers* large, very fragrant, the scent being described as resembling that of the Persian Iris; *sepals* lanceolate acuminate, about one and a half inch long, the dorsal one pure white, the lateral ones with a few purple dots; *petals* broadly ovate, cuspidate, as long as the dorsal sepal, white; *lip* lanceolate, three-lobed, white spotted with purple-crimson, contracted below the lateral lobes which are oblong acute; the central portion of the elongate lance-shaped middle lobe, and the sides of the lateral lobes towards the base spotted with purple, sessile, broader than the base of the column, with two yellow triangular hollow fleshy horns standing erect on the disk. *Column* white, projected over the horns, semiterete, dilated, and somewhat winged upwards.

Epidendrum bicornutum, *Hooker, Botanical Magazine*, t. 3332; *Paxton, Magazine of Botany*, v. 245; *Lindley, Folia Orchidacea*, art. Epidendrum, No. 82; *Jennings, Orchids*, t. 21.

We are glad to be able to bring under notice one of the most beautiful and distinct of this comprehensive genus, and one which has been but seldom seen of late years. Formerly it used to appear at our London exhibitions, and we ourselves exhibited it for many years at Chiswick and the Regent's Park shows, taking prizes with the same plant for several successive years; indeed, it was always admired by Orchid growers. Since then it has lost none of its charms, and when grown like the plant from which our drawing was taken, it will still hold its position as one of the most ornamental of the *Epidendrums*. Sometimes it gets discarded in consequence of some supposed difficulty in its cultivation; we, however, have found no difficulty in growing it, when we have been fortunate enough to get the plant to break after it is imported. It is one of those which are difficult to import, as the front eyes are apt to damp off, and the bulbs to crack. We have seen large lots of this plant imported, of which only a few have succeeded. This is to be regretted, as it is a plant that is in every way worth all the care that can be bestowed upon its cultivation. There is a great deal of pleasure in being

able to succeed with a plant that presents some difficulties in its culture; and in the present case, if it gets the treatment it likes it will grow freely enough. Our drawing was taken from a fine specimen plant in the choice collection of W. E. Brymer, Esq., M.P., Ilsington House, Piddletown, Dorchester, where this *Epidendrum* is grown with great vigour by Mr. Powell, one spike on the plant having borne the unusual number of eighteen flowers. We hope other cultivators will follow so good an example.

Epidendrum bicornutum is an evergreen species, with stem-like pseudobulbs about eight inches in height, furnished with light green foliage. The flower spikes grow about eighteen inches high, proceeding from the top of the stem when the growth is completed; they are upright, and produce twelve or more flowers, which are about two inches across, of good form, pure white, slightly spotted with lilac-purple towards the centre. It blooms during April and May, each flower lasting fresh for two or three weeks, and the spike continuing to open its buds in succession until the last has been developed.

This plant will thrive either on blocks or in baskets. We have grown it well on blocks with live sphagnum moss about its roots; but we prefer the small open teak baskets, with rough fibrous peat or sphagnum moss, lumps of charcoal being intermixed with the peat or moss, and good drainage secured. This plant requires but little material to grow in. It is found naturally on trees and rocks in very damp hot places, and consequently it thrives best in a very hot stove near the ridge of the roof, where it can receive as much light and sun as possible without burning the foliage. Our house stands south-east and north-west, and there it gets first the early morning sun, while as the sun gets higher, the power of its rays are somewhat broken by the ridge of the house, and then in the afternoon it gets the sun from the west, so that it is in the sun all day, with the ridge and rafters to ward off the hottest rays, which would burn the foliage. The plants hang in the same position all the year round; they should not be moved, but kept moist at the roots during the growing season, which is after the flowering is over during summer, and finishes in autumn, but during the summer they get a slight syringing, and are often taken down and soaked in water until the soil is quite moist; during the time of rest, when the plants have finished their growth, they must get only just sufficient to keep the bulbs and foliage plump.

This plant does not like to be disturbed: if doing well never meddle with it. Do not allow insects to attack it, or good results cannot be ensured.

PHALÆNOPSIS SPECIOSA.

PHALÆNOPSIS SPECIOSA.

[Plate 158.]

Native of the Andaman Islands.

Epiphytal. *Acaulescent* or with very short stems, the crown furnished with greenish flexuose roots. *Leaves* few, tufted, drooping, cuneate-oblong, blunt and slightly emarginate, six to eight inches long, slightly seven-nerved, of a palish green colour. *Peduncle* axillary, bearing a drooping raceme about as long as the leaves. *Flowers* showy, some five or six in the raceme, each about one and three-quarter inch across, stellately spreading; *sepals* oblong acute, the dorsal one magenta, indistinctly longitudinally striate, the lateral ones also striate, and closely marked, in addition, with parallel transverse bands of the same colour, the outer surface blotched in a similar way but with the colour less clearly defined; *petals* about the same in size and form, of a similar magenta hue, marked with the longitudinal striæ only; *lip* narrow oblong in outline, three-lobed, the front lobe purple, fleshy, nearly ancipitous, the apex furnished with a cushion of thread-like filaments, the lateral lobes orange-yellow, erect, ligulate retuse, with a few teeth on the outer side, the upper of which is largest. *Column* short, narrowed below, greenish white, the anther-bed toothletted.

Phalænopsis speciosa, *Reichenbach fil.*, in *Gardeners' Chronicle*, n. s., xv., 562; *Id.*, xviii., 302; 745, figs. 130, 131, 132 (varieties).

There can be no doubt as to the high position which *Phalænopsis* takes in the Orchid family. The genus is admitted on all sides to be among the most beautiful, including many fine species, of which, as opportunity offers, we hope to publish portraits. Our present illustration represents one of a group of smaller and newer kinds, quite distinct from the large-flowering species, like *P. amabilis*, *P. grandiflora*, *P. Schilleriana*, &c., which are among the most lovely of the genus. Several new species have of late years made their way into our stoves, and it is really astonishing that collectors in search of Orchids should continue to find novel and handsome kinds. No doubt there is a field yet open for discoveries. We have heard of a scarlet *Phalænopsis*, and we believe it is yet to be found, for some years ago a traveller told us he saw one, but he was not able to procure it, for the poor fellow never went back again. Plants, however, that he spoke of then, have since been brought home. Thus for many years we were only cognisant of the white-flowered *P. amabilis*, &c., then there came the mauve-coloured *P. Schilleriana*, and others, of which we were entirely ignorant; and therefore, we think, it may fairly be hoped that our energetic collectors will some day be fortunate enough to secure the scarlet one, and this would indeed be a grand acquisition to our collections.

The species we now bring before our subscribers is a very pretty one, introduced by Lieut.-Col. Emeric S. Berkeley, Sibbertoft, Market Harborough, from whose plant our drawing was taken. There are several others that Mr. Berkeley has imported, and he seems to be still searching for novelties.

Phalænopsis speciosa is a small compact evergreen plant, with light green leaves, about six inches in length, and bearing flowers of a deep crimson-purple, faintly barred with white. It blooms during the spring months, and continues in perfection for a long time.

It is best grown in the East India house, in a small basket, or on a block of wood. We consider small baskets to be the most advantageous, as they secure to the roots a better and more regular supply of moisture at the time they are in vigorous growth. Sphagnum moss is the best material, a few lumps of charcoal being intermixed with it, and should be accompanied by good drainage. The baskets should be suspended so that the roots can send themselves out into the moist atmosphere of the house, which is what they delight to do. *Phalænopsids* require to be kept shaded from the hot sun, as they can bear but little during the hot summer days, for the foliage being thick and fleshy they soon get disfigured.

Great care should be taken to keep them free from insects. The thrips sometimes attacks them, and, if allowed to accumulate, soon disfigures the foliage and injures the plants, as the juices, which are the life of the plants, are thus taken from them; and since they have no thick fleshy bulbs to support them, but merely their small short stem and roots, they are best grown in the shade, so that the sun may not be allowed to burn them.

Aërides Lawrenciæ.—This fine novelty was exhibited by Baron Schroeder at the meeting of the Royal Horticultural Society, September 9th, 1884, and was unanimously awarded a First-class Certificate. We gave a description of this fine thing under plate 109, of our third volume, and we are glad to find that it bears out all we then said of it. It has proved itself to be a plant of great beauty, and is undoubtedly the finest *Aërides* that has been introduced for many years.—B. S. W.

BRASSIA ANTHEROTES .

BRASSIA ANTHEROTES.

[Plate 159.]

Native of New Grenada?

Epiphytal. *Pseudobulbs* oblong, produced along a creeping rhizome, with lanceolate scales at the base, monophyllous or diphyllous. *Leaves* ligulate-oblong, acute, eight or nine inches long, channelled at the base, nervose. *Scape* radical, gracefully arching, with a few lance-shaped scales at the base, of a dark purplish brown colour, many-flowered. *Flowers* large, and striking in colour, of firm texture, about six inches in the longitudinal and two inches in the cross diameter; *sepals* linear caudate, tapered to the attenuated apex, the dorsal one erect, the lateral ones directed downwards, all bright and very deep yellow, with a blotch of dark purple-brown about an inch long at the base, that of the dorsal one almost entire, that of the lateral ones broken up into two or three smaller blotches occupying about the same space; *petals* of the same linear caudate form, but about half the length of the sepals, yellow, with a smaller solid blotch of dark brown-purple; *lip* oblong, extended into a long caudate apex about half as long as the sepals, dilated towards the front and also at the base, bright clear yellow, with several small dark spots, the margins of the tail-like apex incurved; the disk has an orange-coloured oblong-ligulate callus or crest, broader at the base, cohering at the apex, and velvety inside, with an angular line on each side in front. *Column* short, erect, green, the anther-case yellowish, and the roundish stigmatic hollow dark purple.

Brassia antherotes, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xii., 782.
Oncidium antherotes, *Reichenbach fil.*, l. c. in note.

This genus of Orchids has not received from cultivators the attention it deserves, for it includes several very pretty species. Some years ago their cultivation was more thought of than at present, and splendidly grown plants were to be seen at our flower shows. When they are well brought out, with their fine green foliage and numerous spikes of quaint-looking flowers, they always attract attention. Possibly the cause of this neglect is that there have been so many new things introduced of late, especially among the Odontoglots, some of which, after all, are not half so beautiful as certain of these *Brassias*. The specimen of which we now offer a representation is one of the better kinds of *Brassia*, and when we exhibited it at the Royal Horticultural Society, South Kensington, it was awarded a First-class Certificate, and was greatly admired by those who saw it. We have flowered the same plant for two successive years at the Victoria Nurseries, so that we can testify it is a species of easy cultivation, and one that blooms very freely.

Brassia antherotes is an evergreen plant, with bright shining flat green pseudobulbs, and grows about eighteen inches high; the foliage is of a lively green colour; the flower spike is produced from the side of the pseudobulb after it has completed its growth, and is about a foot in length, of a gracefully drooping habit; the sepals and petals are deep yellow, beautifully spotted towards the base with dark purple-brown. It is a rare species, and has only bloomed in a few collections, the flowers being produced in May and June, and lasting three weeks in beauty. Our information respecting its native country is imperfect.

This plant is best grown in a pot, with fibrous peat and perfect drainage. It should be cultivated in the Cattleya house, with a moderate amount of water during the time it is making its growth, which is when its blooming season is over. All *Brassias* like a little shade, as the leaves are apt to get scorched; but all the light possible must be given them. They will also do well in baskets suspended near the roof, where they will get an abundance of light.

Oncidium Jonesianum.—W. Lee, Esq., Downside, Leatherhead, has in flower a fine plant of this new and beautiful species, bearing a spike of eleven flowers; and our artist having taken a sketch of the plant, we shall be able to present its portrait to our subscribers on some future occasion. The foliage of this plant is very distinct, resembling an upright growing *Scuticaria* in habit; the leaves are terete, twelve to eighteen inches long; the spike pendent, the sepals and petals yellowish green distinctly spotted with dark brown, and the lip cuneate in shape, pure white, spotted at the base with brown, its side lobes yellow.—B. S. W.

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Hanhart del et lith.

B.S.Williams imp.

AËRIDES VIRENS.

AËRIDES VIRENS.

[Plate 160.]

Native of Java and India: Burmah.

Epiphytal. *Stem* erect or spreading, stout, clothed with distichous leaves, throwing out stout aërial roots from below. *Leaves* broadly ligulate, obliquely retuse, channelled at the base, leathery, and of a peculiarly bright green. *Peduncle* axillary, bearing a pendulous many-flowered cylindrical raceme. *Flowers* of the general form of those of *A. odoratum*, and like them deliciously fragrant; *sepals* oblong obtuse, of a bright rose colour, deeper at the tips, and indistinctly striate, the lateral ones broader; *petals* oblong-cuneate, smaller than the sepals, but similarly coloured; *lip* inflated, and forming a thick acuminate ascending or incurved horn or spur nearly an inch in length, of a rich magenta-rose, especially high-coloured down the anterior face, and tipped with green; the lateral lobes denticulate at the upper end, the middle lobe lanceolate, channelled in the middle part, and denticulate towards the tip.

Aërides virens, *Lindley, Botanical Register*, 1843, misc. 48; *Id.*, 1844. t. 41: *Id., Paxton's Flower Garden*, in note under t. 66.

We have no hesitation in saying that the genus *Aërides* includes some very charming species. In their beautiful foliage and the graceful appearance of their inflorescence, the species of *Aërides* always present features for admiration. They have, indeed, every good point that a plant can possess, namely, beautiful foliage, graceful habit, fine drooping flower spikes, richly-coloured flowers, fragrance most exquisite, freeness in blooming, easy cultivation, and cheapness—what more can be desired?

In the case of *Aërides virens*, which we now figure, the size of our plate does not permit of doing full justice to the plant, and if we could but have given it life size, our representation would have been much more attractive. There are several varieties of this species, varying in size.

Some persons imagine that East Indian Orchids require a great deal of heat, which is a mistaken notion, as too high a temperature often causes an entire failure. Of course, the day temperature in the East Indies is very intense, but this is when the sun is at its full power, and even then the trees shade the plants to a certain extent; moreover, they get a free circulation of air all the year round, and the nights and early mornings are cool, which we can imitate—at least, to a very great extent. Our cultivated plants being confined under glass, of course we cannot

give them the same free circulation of air they get in their native habitats, but we must use the best means at our command in order to imitate their natural conditions as nearly as possible; and thus by perseverance, attention, and observation, most of our cultural difficulties may be disposed of. We have grown our plants in the same house for many years, with no failures to speak of. There will necessarily always be some plants that thrive better than others, as in all classes of Orchids, although they may be receiving exactly the same treatment.

Our plate was taken from a fine plant in the collection of E. Wright, Esq., Gravelly Hill, Birmingham, who has been growing Orchids for many years, under the care of Mr. Hodges, who has had the management of them, and who has taken great interest in the plants under his charge.

Aërides virens, like all the other species of the genus, is evergreen, and has dark green foliage, about ten inches in length. The flower-spikes proceed from the axils of the leaves, on each side of the stem, and are about eight inches in length; the flowers are white, tipped with crimson-purple, and deliciously scented; it produces its flowers during June and July, and continues from two to three weeks in perfection.

The material we find to suit the *Aërides* is good live sphagnum moss, whether they are grown in pots or baskets; these should be three parts full of drainage, for which we use broken pots, filling up with moss, and a few broken potsherds mixed with it to keep it open. The moss must not be pressed too tightly in the pot or basket. They are best grown as much in the light as possible, being slightly shaded from the hot sun in summer; during autumn and winter they should have plenty of sun and light to induce them to form sturdy growth and bold firm leaves. On this generally depends their flowering. Some people keep them shaded too much, whereas they do not require a thick shade.

This plant wants more attention than some growers give to it. The East Indian Orchids must never be kept too wet at the roots; and although, at times, they get a good deal of rain in their native country, yet it must be remembered that they there grow on trees, where they get a free circulation of air—not indoors, in pots or baskets, under which conditions we have to cultivate them. The temperature should range from 60° to 65° at night during winter, and may rise a few degrees higher by day; and as the days lengthen more heat may be given, but too much fire heat should always be avoided.

J.Mument Fitch del.et lith

EPIDENDRUM RADICANS.

B.J.Wilson

EPIDENDRUM RADICANS.

[Plate 161.]

Native of Mexico and Guatemala.

Epiphytal. *Stems* tall, erect, leafy, terete, more or less tinted with purple, leafless but vaginate for a considerable distance from the top, emitting long white roots opposite the leaves. *Leaves* fleshy, subcordate ovate-oblong, obtuse, emarginate, channelled, distichous, about two inches long, partially sheathing the stem. *Peduncle* terminal, erect, invested by appressed lanceolate sheathing bracts, smaller upwards, the pedicels with still smaller lanceolate bracts at their base. *Flowers* numerous, in a roundish corymbiform raceme, highly coloured, each about two inches in depth; *sepals* and *petals* lanceolate acute, spreading, the petals rather more narrowed at the base, deep bright cinnabar; *lip* adnate to the column, and projected forwards with it fully half an inch, keeled, the limb roundish in outline, deeply three-lobed, with a pair of calli at the base, the lateral lobes acinaciform, sharply toothed, the anterior lobe cuneate, deeply biparted, the segments with a fringe of long sharp teeth, entire at the sides, of a deep orange-scarlet, with a few bright crimson spots on the disk. *Column* terete, broader upwards.

Epidendrum radicans, *Pavon MSS.*; *Lindley, Genera and Species of Orchidaceous Plants*, 104; *Id. Folia Orchidacea*, art. Epidendrum, 220; *Reichenbach fil.*, in *Walpers' Annales Botanices Sytematicæ*, vi., 300; *Paxton, Magazine of Botany*, xii., 145, with coloured plate.

Epidendrum rhizophorum, *Bateman*, in *Botanical Register*, 1838, misc. 10.

We follow our great Orchidological authorities, Lindley and Reichenbach, in adopting for this plant the name of *Epidendrum radicans* instead of that of *E. rhizophorum*, given to it by Bateman, and by which it is more familiarly known in gardens. It offers one of those cases in which, at the first, a name already bestowed has not been looked up, or has escaped recognition, an oversight which has to be corrected as soon as it is discovered. Dr. Lindley, it would appear, had seen, in Lambert's Herbarium, an authentic specimen of Pavon's, and when the living plant came before him he recognised its identity therewith, and made the necessary emendation.

Our present subject is one of the most distinct members of a very extensive genus, and one that is well worth cultivating for its ornamental qualities. There are few Orchids which yield the orange-scarlet colour found in this plant, and this makes it all the more welcome. The species is of scandent habit, and often attains the height of ten feet or more, the stems being generally trained around sticks, or on

a balloon-shaped trellis of wire. The late Mr. Woolley, when gardener to H. Bellenden Ker, Esq., used to exhibit it trained in this way at the London shows, and bearing a number of its richly coloured flower spikes; in this case the growth was carried above the wires, so that it did not assume such a formal character as this kind of training sometimes takes on, a state of things which does not look well when applied to Orchids, but by judicious arrangement Mr. Ker's specimen was made to look attractive, the colour being very brilliant. It is an old plant, but now we seldom see it in collections. It is not always free-blooming, but we find it flowers well when looked after, and the growths are strong. It generally yields its flower spikes every year if it receives the treatment required. Our drawing was taken from a plant in the fine collection of Baron Schrœder, The Dell, Staines, where, under the care of Mr. Ballantyne, it blooms freely.

Epidendrum radicans is an evergreen scandent Orchid, producing long roots from the stems, and having light green foliage; it produces its flower-spikes from the apex of its growths, and the spikes continue to bloom for several months, until the last buds are developed; the blossoms are brilliant scarlet, with the lip orange-scarlet, and are produced during the spring and summer months.

This plant is best grown in a pot, as it is then more easy to train, but since it throws roots out all up the stems, it does not require a large pot, as it roots very freely in the moist atmosphere of the house. The material for growing it in should be rough fibrous peat or sphagnum, with good drainage, as it requires a great deal of water during the growing season. A daily syringing during warm weather will help it, as its roots are almost all out of the pots, and even in winter it requires to be kept somewhat moist.

The East Indian house will suit it, as it can there receive plenty of light and heat to induce it to grow vigorously and flower freely. The plants begin to show flower during winter. Orchid growers generally keep this plant too dry; this, however, is a mistake, for if allowed to shrivel it will lose its leaves, which will disfigure it. Should the plant get too tall, cut it down, and grow it on again; if there are roots up the stems it will break again, providing some foliage is left on the bottom where the growth is cut off. It requires but little shade during the hot part of the day in summer. We have seen it thriving well trained close to the roof of the house. It will grow in any ordinary stove where there is light and heat, with abundant moisture, and we have seen it grown well in the Cattleya house.

J.Nugent Fitch. del. et lith.

ANGRÆCUM BILOBUM KIRKII.

B.S.Williams Publ.

ANGRÆCUM BILOBUM KIRKII.

[Plate 162.]

Native of the East Coast of Tropical Africa: Zanzibar.

Epiphytal. *Stems* short, erect, rooting below, and bearing a few spreading leaves, which are distichous and evergreen. *Leaves* ligulate, broadest upwards so as to become subcuneate, equitant, furrowed, shorter than the racemes, deeply and often unequally bilobed with the lobes divergent. *Scape* bearing a few flowered raceme, radical, drooping. *Flowers* spreading, stellate, about two inches across; *sepals* lanceolate, attenuately-acuminate, an inch long, pure white, channelled; *petals* lanceolate acute, shorter than the sepals which are attenuately elongated, also pure white; *lip* about the same in size as the sepals and petals, oblong-lanceolate, more equal in width, that is more oblong than the other parts, and, like the sepals, drawn out to a fine point. *Spur* slender, terete, curved, two and a half to three inches long, pale reddish brown. *Column* short, white.

Angræcum bilobum Kirkii, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xviii., 488; *Williams, Catalogue* 1883, p. 24.

Several new species have been added to this genus, and we are very glad to welcome them as they are such interesting objects, and so peculiar in the shape of their flowers, most of them having long tails or spurs hanging from the basal part of the lip. The flowers are usually of a waxy white, some of them being of large size, and the plants themselves are of handsome appearance, as, for example, *A. eburneum* and *A. sesquipedale*, which are of majestic habit, with stately evergreen foliage as well as fine spikes of flowers.

Our present subject is one of the smaller-growing and pretty kinds, of which there are several of considerable rarity being brought to our stoves. We are very glad to find that there are many growers taking to these smaller kinds, as well as to the larger ones; for the former take up but little space in the Orchid houses, and in themselves are very lovely. This gem was flowered at the Victoria Nurseries, having been sent to us from Zanzibar by Sir John Kirk, who has introduced several other new species, and in whose honour it was named by Professor Reichenbach.

Angræcum bilobum Kirkii is a compact-growing evergreen plant with dark green foliage, nearly four inches long, and flower-spikes which are produced from the side of the stem, and are of drooping habit. The flowers are pure white, and they have tails nearly three inches in length. The present variety blooms in September, and lasts for some time in beauty.

This plant is best grown in a small pan or basket, suspended near the light, but shaded from the burning sun. The material we use is sphagnum moss, with good drainage. It will also do on blocks of wood, but when grown on these more water is required. These plants always like a little moisture about them, as they have no thick fleshy pseudobulbs to support them. They do well in the East Indian house.

These small plants should be kept free from insects. The black thrips sometimes attacks them, so that they require to be watched, and from time to time cleansed.

Rare Orchids at Streatham.—When visiting the collection of Orchids belonging to R. H. Measures, Esq., Woodlands, Streatham, we were much pleased to see in flower a few floral gems which it does not often fall to one's lot to admire. Foremost among these was the beautiful little *Saccolabium Hendersoni*, and a very fine form it was, growing most luxuriantly on a block of wood plunged in a pot. *Miltonia candida grandiflora* was also blooming profusely, as well as the rare *M. Regnellii purpurea*, which was a fitting companion for it. The new *Dendrobium cruentum* was also in flower; this is a very distinct species, belonging to the nigro-hirsute section; the sepals and petals are yellowish green, reticulated with a darker green, and the lip is yellowish green, margined distinctly with bright crimson-scarlet, and having the crests and side lobes of the lip marked with the same colour. Mr. Measures, although only commencing Orchid culture, has evidently hit upon a right plan—one which, were others to follow it, we should hear of fewer disappointments. His method is to make notes of good species and varieties that he sees or reads of, and to procure good healthy plants of these only, for, he says, and rightly too, that good things take up no more room than inferior or bad ones, and, although they cost more in the first outlay, they yield the greatest pleasure in the end.—H. W.

Cattleya Brymeriana.—W. E. Brymer, Esq., M.P., Dorchester, has favoured us with a grand spike of this new Cattleya; it bears six flowers, and is both distinct and beautiful. The sepals and petals are pale rose colour, the lip square at the apex and flat, bright magenta, the upper portion surrounding the column folded closely over in the same way as that of *Lælia elegans;* throat bright orange. We should be inclined to take it to be a natural hybrid between *Lælia elegans* and *Cattleya Eldorado*.—B. S. W.

ODONTOGLOSSUM WILLIAMSIANUM.

ODONTOGLOSSUM WILLIAMSIANUM.

[Plate 163.]

Native of Costa Rica.

Epiphytal. *Pseudobulbs* oval, compressed, tufted, usually diphyllous. *Leaves* ligulate oblong acute, ribbed, channelled, especially near the base. *Scape* proceeding from the base of the pseudobulb, with sheathing scales below, and bearing large showy flowers in a dense oblong twelve-flowered raceme. *Flowers* four and a half inches across, and about the same in depth, yellow and chestnut-brown; *sepals* lanceolate acuminate, wavy, greenish yellow, transversely barred and blotched from base to apex with deep chestnut-brown; *petals* distinctly clawed, suddenly widening into an oblong, slightly wavy, blunt-ended blade, fully two inches long, the claw and basal half of the blade covered by a blotch of light brown traversed by darker veins, and lobed at the anterior edge, the anterior half bright yellow; *lip* half the size of the petals, roundish, rather broader than long, with an apiculus, the base narrowed suddenly into a short claw, the colour a pale primrose-yellow, marked at the base with three or four concentric bands of very pale brown; claw deep red-brown, with a very prominent crest, yellow spotted with red. *Column* projecting, yellow.

Odontoglossum Williamsianum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xvi., 134.

Of this beautiful and comprehensive genus, which now includes so many charming new species, our persevering and energetic collectors are chiefly introducing those of the *Alexandræ*, *Hallii*, and *Pescatorei* types, which are all very beautiful, and truly welcome to our Orchid houses. There are, however, none so showy as those of the *Odontoglossum grande* section, which are quite distinct in character, and generally bloom in August and September. The one we now figure, which belongs to this group, flowers in July. At first sight this plant somewhat resembles *O. grande*, but upon closer examination it will be seen that it differs considerably from that species, the shape and markings of the petals, as well as the colour and crests of the lip, being perfectly distinct. In fact, the outline of the flower takes more after *O. Schliperianum*, and the colouring more after *O. grande*. It was exhibited at the Royal Horticultural Society's meeting, where it was awarded a First Class Certificate. The plant then shown bore a noble spike with twelve flowers, which is more than *O. grande* produces; the spike also stands up and shows itself off better, and the flowers are more compactly arranged on the spike. No doubt as the plant gets stronger it will produce more blossoms. We have flowered it two years in succession at the Victoria Nursery, and it was finer this year than last, the pseudobulbs being stronger,

Odontoglossum Williamsianum is an evergreen species, with pseudobulbs about three inches high, bearing at the top a pair of leaves about ten inches in height; the spike proceeds from the side of the bulbs, and bears as many as twelve flowers. The sepals and petals are of a greenish yellow, with distinct brown transverse bars; the petals are yellow, having a large pale brown anteriorly-lobed blotch at the base; and the lip is pale lemon-yellow, with a few pale dull reddish brown spots at the base. It continues in bloom for about four weeks.

This plant is now in the possession of the Comte de Germiny, Gouville, France. It is the only plant we have seen. Professor Reichenbach thinks it is a natural hybrid between the two fine species referred to above, namely, *Odontoglossum grande* and *O. Schlieperianum.*

This is a free-growing, as well as a free-blooming, plant. We grew it in a pot, with rough fibrous peat and good drainage, in the cool Odontoglossum house, on a shelf near the glass, where it received plenty of light, but was quite shaded from the burning sun. It must also be kept moderately moist, but not so moist as *Odontoglossum Alexandræ.* The same general treatment as suits *O. grande* is applicable to this fine novelty.

The National Industrial and Horticultural Exhibition at Rouen.—We had great pleasure in paying a visit to this exhibition in August last. It was one of great interest throughout, though our chief object was to see the floral part of it. The grounds were tastefully laid out, and well planted with ornamental trees and shrubs, including Palms and other foliage plants; also many beds of flowering plants, the whole surface well diversified and undulated, intersected with broad walks, and set off with grass lawns. There was a grand piece of water with many interesting aquatic plants in full bloom, and having a well-arranged fountain in the centre. The building all around contained a magnificent exhibition, in which were all kinds of machinery and various products manufactured in France and her Colonies. Our object is to describe a grand lot of Orchids exhibited by the Comte de Germiny, Chateau de Gouville, near Rouen, France. This collection was placed in a span-roofed house 70 feet long, and 20 wide, which was kept filled with foliage plants, Orchids, and other flowering plants, the whole time the exhibition was open, all maintained at the Comte's own expense, which was a great undertaking for one gentleman to keep going for so long a time. When we were there in the month of August it was a grand sight, there being many wonderful specimen Orchids, some of the best of which we will describe. An enormous specimen of *Cattleya crispa* four feet in diameter, bearing 125 flowers, a gorgeous sight. *Sobralia xantholeuca,* a most rare and remarkable specimen, with many flowers of a creamy yellow, the lip lemon-yellow, and the throat orange colour, a most distinct species. *Epidendrum prismatocarpum* with twelve fine spikes. On either side of the path were two magnificent plants of *Cattleya gigas,* with their large showy flowers. *C. labiata pallida* had over twenty spikes of flowers and buds; it was in grand

[*For continuation, see under Plate 164.*]

J. Nugent Fitch del. et lith.

MILTONIA SPECTABILIS RADIANS.

MILTONIA SPECTABILIS RADIANS.

[Plate 164.]

Native of Brazil.

Epiphytal. *Pseudobulbs* produced on a progressive scaly rhizome, short, oblong, compressed, with accessory subleafy sheaths or bracts investing their base. *Leaves* two, lorate, obtuse, emarginate, keeled behind, of a pale green colour. *Scape* ancipitous, each bearing a solitary blossom, produced from the base of the pseudobulb in the axil of the accessory leafy bract, and sheathed with yellowish lanceolate appressed spathaceous bracts. *Flowers* about three inches in diameter and over four inches in depth, distinctly marked on the disk; *sepals* oblong acute, spreading trianglewise, an inch and three-quarters long, creamy white; *petals* similar in all respects except that they are rather shorter; *lip* free, roundish flabelliform, or pandurately-obovate, retuse, slightly wavy at the edge, and conspicuously marked by about three pairs of longitudinal veins, pure white with a distinct crest of three yellow linear lamellæ, rather thickened and blunt in front; on the discal portion is a conspicuous blotch of about six club-shaped slightly curved bars three-quarters of an inch long of magenta-purple, radiating from the base, two thin lines running back through the trilamellate yellow crest, and the thin ends of the others continued backwards parallel with the crest as far as its base. *Column* white, bordered with magenta near the top.

Miltonia spectabilis radians, *Reichenbach fil.*, *Xenia Orchidacea*, i., p. 130; *Id.*, *Walpers' Annales Botanices Systematicæ*, vi., 759.

There are several fine species of *Miltonia* in cultivation, *M. spectabilis* and its varieties being amongst the most beautiful. The variety which we now bring under the notice of our readers is a most chaste-looking plant, and being one of the best of the *spectabilis* section, it should be more extensively grown. The cultivation of this species has been very much neglected of late years. In former times we were in the habit of seeing fine specimens of *M. spectabilis* and also of its variety *Moreliana*, especially the former, each bearing a hundred or more flowers, and coming at a dull time of year, when few Orchids are in bloom—that is, during August, September, October, and November. This should be a sufficient inducement to gain them a prominent place in our Orchid houses. We ourselves having flowered the plant we now figure, were anxious to bring so charming a subject before the public, in order that it and its congeners may become more generally cultivated than they are at present, and in such a manner as to secure good specimens for flowering during the autumn season.

Miltonia spectabilis radians is an evergreen plant, and grows about eight inches in height, with short thin pseudobulbs of a light green colour. The foliage is also pale

green, and the flowers are produced each on a scape about six inches high springing from the side of the pseudobulb. The sepals and petals are of a creamy white, and the lip is pure white with seven or eight radiating blotches of crimson-purple at the base. It blooms during July and August, and lasts four or five weeks in beauty.

We find this plant does well grown in pots or baskets, and will also thrive on blocks of wood, but we prefer the two former modes. The compost should consist of rough fibrous peat or live sphagnum moss. These plants have a sort of creeping stem or rhizome, and, of course, require more pot room for the plant to ramble over; but they require very little material to grow in. The pot should be nearly filled with drainage, and moss or peat placed on the top of it, being raised to about two inches above the rim of the pots; then set the plant on the top, and peg it down securely, when it will quickly root into the fresh compost. A few lumps of charcoal should be put between the roots. The plants require a good supply of water when they are in vigorous growth; but after that is completed less will suffice. The pseudobulbs should always be kept plump, and the roots never allowed to get dry, as the bulbs are then apt to shrivel, which is injurious to them.

We find the shadiest part of the East Indian house to suit them best; in this position the foliage keeps of a better colour. We often hear people complain of them turning a sickly yellow-green, but we attribute this to giving them too much sun. These plants are best potted when they are starting into growth.

[*Concluded from Plate 163.*]

health, and is a most showy and useful variety. *C. Harrisoniana violacea* was of a most brilliant mauve colour. *Lælia Turneri*, was in fine form and bright in colour. *Oncidium macranthum* was finely in bloom, its bright yellow and bronze-coloured flowers being very attractive. Of *Cypripedium superbiens* there was a fine plant in bloom. By the side of this were some fine plants of *Cattleya Dowiana* well flowered; also *C. Leopoldii* with its singular spotted flowers, and *Oncidium Lanceanum*. A very fine and showy plant of *Saccolabium retusum*, with its long spikes of lively-coloured flowers. Several fine specimens of *Phalænopsis* in full beauty. The *Vandas* were well-grown plants, and well-bloomed, producing fine spikes, and included such as *tricolor superba*, and *tricolor planilabris* with its showy flowers; there were several plants of *V. suavis* standing at each end of the house. Also of *Epidendrum vitellinum majus* with numerous spikes of bright orange-scarlet flowers. There were many *Stanhopeas* suspended from the roof, and also many other fine Orchids too numerous to name. Intermixed with these were fine foliage plants, and a great quantity of specimen *Anthuriums*, such as *A. Andreanum* and *A. ferrierense* in full bloom; also some gigantic specimens of *A. Scherzerianum*, besides other flowering plants. On one side there were some eight hundred plants of *Gloxinias* in full bloom, the best strain we have ever seen, the size and colouring of the flowers being remarkable. The arrangement altogether was magnificent, and great praise is due to the Comte de Germiny, and his energetic gardener, Mr. Rondeau, who evidently has great taste, and knows how to set his plants off to the best advantage, as well as to grow them in a thoroughly successful manner.—B. S. W.

DENDROBIUM MOSCHATUM CUPREUM

DENDROBIUM MOSCHATUM CUPREUM.

[Plate 165.]

Native of Burmah.

Epiphytal. *Stems* terete, striate, three to four feet high and as thick as a stout pencil, the internodes invested with a pale brown membrane, representing the sheathing bases of the fallen leaves, the older leafless stems floriferous. *Leaves* oblong-lanceolate acute, subdistichous, dark green. *Peduncles* issuing from the nodes of the leafless stems, bearing a drooping raceme of about eight flowers, which have an ovate scarious bract, half-an-inch long, at the base of each pedicel. *Flowers* expanded, about three inches across, with a slight but agreeable coumarin odour, of a bright apricot-yellow, the lip somewhat darker; *sepals* oblong acute, narrowing upwards from a broad base, the dorsal one an inch and a half long by half-an-inch broad, tessellately veined, the lateral ones produced behind at the base (but not united) into a blunt spur; *petals* broader, obovate-oblong obtuse, tessellately veined, the spaces between the veins almost transparent; *lip* calceiform, about an inch long, closely folded back on itself, the edges incurved, these and the front part pubescent, of a rather deeper tint of dull apricot, with a dark coppery orange blotch on each side near the base, the claw suffused with the same colour, the disk bearing a crest of five raised veins clothed with short coloured hairs. *Column* very short, concave, stained with a coppery red tint below the stigma, the lid spotted with purple.

Dendrobium moschatum cupreum, *Reichenbach fil. MSS.*

Dendrobium cupreum, *Herbert*, in *Botanical Register*, under t. 1779.

Dendrobium Calceolus, *Williams, Orchid Growers' Manual*, ed. 5, 166; and of many gardens.

There is in gardens considerable misapprehension respecting the name of the plant we now figure, which is generally known as *D. Calceolus*. The species properly so called, is, however, the same thing as *D. moschatum*, which name has the precedence, and thus *D. Calceolus* should drop out of use. The plant which has been so called is, no doubt, as will be seen by our illustration, sufficiently different for *D. moschatum* to be grown alongside of it, and is, in truth, a very distinct and beautiful example of the great group of showy Dendrobes. It is as we learn from Professor Reichenbach, the *D. cupreum* of Herbert, but, as he is not yet convinced of its specific distinctness from *D. moschatum*, he prefers to regard it as a variety under the name we have adopted.

Our figure of this *Dendrobium* brings many old associations to our minds. We recollect blooming the plant very many years ago, when there were not so

many fine species as there are at the present day; but, notwithstanding, all the novelties we have acquired, and many of them are most beautiful, we consider that *D. moschatum cupreum*, which we grew under the name of *D. Calceolus*, is one of the most distinct amongst them, and not so common as the type *D. moschatum*. It does not grow so vigorously as that kind, but blooms very freely from the two-year old stems, and continues producing spikes from the old stems for two or three years. It is worthy a place in every collection, and can be grown in any warm stove, intermixed with other plants.

The plant from which our figure was taken has been grown on a piece of flat board. It is a large imported mass, and is suspended from the end of a plant stove, where it sends out its long drooping flower spikes, as many as thirty at a time, and, consequently, when in bloom, has a very showy appearance. Grown in this way it does not take up much room.

Dendrobium moschatum cupreum is an evergreen species, though producing its flowers upon the stems from which the leaves have fallen. It grows from three to four feet in height, has long tapering stems and dark green foliage, and produces its showy flowers from the top part of the stems in racemes of twelve or more together. The flowers are large, the sepals and petals bright apricot, and the lip of the same colour, with a deeper eye. It blooms during the summer months, each flower spike lasting about six days in bloom.

The plant will thrive well in a pot, or on a block as we have described above, but if grown in that way, more water will be required. If grown in a pot, good fibrous peat on sphagnum moss will suit it, but it must have sufficient drainage, and plenty of light to ripen the growths well, which is the best means of securing plenty of flowers.

CATTLEYA CALUMMATA .

CATTLEYA CALUMMATA.

[Plate 166.]

A Garden Hybrid.

Epiphytal. *Stems* somewhat slender, clavate, diphyllous, three or four jointed, purplish. *Leaves* oblong obtuse, emarginate, of a pale grey colour. *Peduncles* two-flowered. *Flowers* four and a half inches across, beautifully spotted, on a ground delicately flushed with purple, and of a very pale greenish brown outside; *sepals* linear-oblong, upwards of two inches long, the dorsal one straight, the lateral ones slightly falcate, abruptly acute at the apex, about a quarter of an inch wide where set on at the base, the inner surface white slightly suffused with purple, spotted throughout with numerous smallish round or transversely oblong dots of magenta-purple, the outer surface pale brownish green, with a flush of purple, the spotting of the interior showing through; *petals* bluntly lanceolate, as broad as the sepals in the middle part, but a little narrowed towards the tip, the base narrowed like a claw, coloured like the sepals; *lip* as long as the sepals, three-lobed, the basal lobes an inch long, meeting along the back of the column, recurved and abruptly rounded in front, flushed with pale purple, as in the sepals, narrowed about half way up to an isthmus, about half an inch wide, by an open rounded sinus, the front lobe transversely roundish-oblong emarginate, the margin somewhat undulate and crenate, both surfaces of an intensely rich magenta, the under part of the basal portion blush-white, and the magenta line inside forming a broad bar three-eighths of an inch wide, extending to the base of the lip. *Column* stout, clavate, with thin produced margins, purple. *Pollen-masses* four.

Cattleya calummata, *André, Revue Horticole*, 1883, 564, with tab.; *Gardeners' Chronicle*, n.s. xx., 786 (*calumniata*, by error).

In our present subject we have one of the fine Hybrid Cattleyas which have been raised by M. Alfred Bleu, of Paris. It is the result of a cross between *Cattleya Aclandiæ* and *C. intermedia*. These hybrids are most difficult to obtain, although the Messrs, Veitch & Sons, and others, have been successful in producing some of very great beauty. The one now before us is a most charming plant, and one that will be welcomed by all those growers whose accommodation is limited, as well as by those that have more space at their command; for it will be seen by our figure that the plant is of dwarf-growing habit, and it is also free-blooming, indeed, it is said to bloom two or even three times a year. The new hybrid partakes more of the characteristics of *C. Aclandiæ* in its manner of growth and in the size of its flowers, but it appears to be more free in its development.

We are indebted, as already noted, to M. Alfred Bleu, of Paris, for the pro-

duction of this new and valuable plant, and we believe he is still persevering in the raising of hybrid Orchids, an occupation which we advise him to continue, as being most interesting work.

Cattleya calummata is an evergreen plant, and produces slender club-shaped stems, from four to six inches high, surmounted by two leaves of a light green colour, from between which the flowers proceed at the time the plants are making their growth. The sepals and petals are white, heavily blotched with rosy purple, and the lip is a bright magenta, in shape similar to that of *C. Aclandiæ*. The plant from which our drawing was taken flowered in August, and the flowers were found to last some time in perfection.

This plant requires the same kind of treatment as *Cattleya Aclandiæ*. M. Bleu's plant was grown in a basket, with rough fibrous peat and sphagnum moss, and we are following the same plan. It should be suspended from the roof, near the light, but shaded from the burning sun, and should get a good supply of water, as it grows and flowers nearly all the year if kept in a free healthy state. All these small kinds of *Cattleya* require careful watching as regards the application of moisture, for if they are allowed to shrivel they are not so easy to get round again. These small-growing sorts require to be kept plump in their stems and pseudobulbs, as well as in their foliage, and on this, in great measure, depends the successful growth of the plants. These little gems are worth all the trouble that can be bestowed on them, for although they are but of small stature, they produce fine flowers and are hence specially useful for cutting for coat and dress flowers, since many Orchid growers like to wear their pet flowers.

It must be borne in mind that Cattleyas of this type should be always kept free from insects. The white scale is troublesome if allowed to exist upon them, for their stems are thin and require all the strength that can be secured in them, and if insects prevail they will deprive them of their sustenance. Sometimes the thrips will attack them, but it should be cleared off as soon as it appears; indeed, a close watch should be set over them, to free them of all such intruders.

ODONTOGLOSSUM CERVANTESII.

ODONTOGLOSSUM CERVANTESII.

[Plate 167.]

Native of Mexico.

Epiphytal. *Pseudobulbs* short, ovate, angular, clustered, monophyllous. *Leaves* oblong acute, narrowed into a short channelled footstalk. *Scape* radical, few-flowered, with long equitant, acute, brownish, membranaceous sheathing bracts. *Flowers* two and a half inches across, white, or more or less deeply tinted with pink, beautifully marked in the centre; *sepals* membranaceous, oblong-lanceolate, acute, white with a streak of rosy purple up the centre; *petals* broadly ovate, bluntish, somewhat unguiculate, about twice as broad as the sepals, pure white, both sepals and petals marked near the base with close-set concentrically arranged transverse bars of brownish crimson, on a yellowish green ground; *lip* ovate and slightly cordate, acute, white, with a fleshy cup-shaped downy stalk, having in front a yellow crest consisting of a double tooth, in advance of which stand a pair of long hairy processes. *Column* white, downy, with large rounded ears.

Odontoglossum Cervantesii, *La Llave and Lexarza Novorum Vegetabilium Descriptiones*, ii. 34; *Lindley, Botanical Register*, 1845, t. 36; *Id., Paxton's Flower Garden*, i., t. 15; *Paxton, Magazine of Botany*, xii. 193; *Illustration Horticole*, t. 12; *Moore, Illustrations of Orchidaceous Plants*, art. Odontoglossum, t. 4.

We now bring before our readers one of the oldest of the Odontoglots. We have grown it for many years, and it still ranks as one of the prettiest and most distinct members of this lovely genus. It is small growing, but very free in producing its showy flowers; and it is one that takes up but little space. It is, in fact, always an interesting plant, and lasts a long while in bloom in a cool house, which is a great recommendation to it. There are several other species like it in growth, and which flower in the same style, such as *O. Rossii majus* and *O. membranaceum*, and some other beautiful forms.

Our drawing was taken from a plant in the fine collection of W. Thompson, Esq., The Grange, Walton, Stone, Staffordshire, where Odontoglots and other Orchids are very successfully cultivated under the care of Mr. Stevens, the gardener.

Odontoglossum Cervantesii is a dwarf evergreen plant, with small angular pseudobulbs, and light green foliage. The sepals and petals are white, densely barred with reddish brown at the base, the markings being arranged in a concentrical manner. There seems to be considerable variation in the plants, the ground colour, in some, being white, as in our figure, and in some, more or less tinted with pink

or pale rose. It blooms during spring, and continues in flower for six weeks; a quality which makes it very valuable, both for cutting and for decoration.

We find that this plant succeeds well in a basket, or pan, suspended from the roof, with good fibrous peat on sphagnum moss, and with thorough drainage, some charcoal being mixed with the peat to keep it open. This requires a moderate supply of water during the growing season, but when at rest, the material should merely be kept a little moist. It will thrive in the same house as cool Odontoglots.

Orchids at J. Buchanan's, Esq., Oswald Road, Morningside, Edinburgh.—We paid a visit to this collection of Orchids in September, and saw some good specimens. We will merely name a few of the best:—*Cattleya Trianæ*, a plant three feet across, and showing twenty-four sheaths for bloom, and in wonderful health. A fine plant of *Epidendrum Wallisii*, with six growths, which have bloomed well. Next this, was a fine plant of the *Vanda suavis grandiflora*, one of the best of the section; it produces fine flowers, with larger spots than the old *V. suavis*. Associated with this was a fine specimen of *Lælia purpurata alba*, three feet across, with fine growth; this is one of the best forms of *L. purpurata*, as the sepals and petals are pure white, with a richly coloured lip, which stands out boldly. The curious *Nanodes Medusæ* was fine, with thirty growths. *Lælia elegans prasiata* was grandly in bloom. *Maxillaria grandiflora* was a large specimen in full bloom, making a good show. The noble *Odontoglossum grande*, and many others such as *O. Alexandræ*, *O. Pescatorei*, and other fine Odontoglots, were in an attractive condition. A fine plant of *Dendrobium Brymerianum* is the best example we have seen; and a specimen of *Cattleya Mossiæ* had borne sixty-five blossoms. Besides these specimens, there were a fine lot of *Vandas*, and many other rare Orchids. The way in which this collection is grown, does Mr. Grossart great credit; and so do the fine foliage plants, and others, that are under his care.—B. S. W.

Cattleya gigas.—We received, lately, from M. Jules Picot, Chateau de Sauvage, par Espernon, France, a splendid inflorescence of this giant *Cattleya*. It was one of the finest varieties we have ever seen. The individual flower measured eight inches in diameter, the petals being three-and-a-quarter inches across, and they, as well as the sepals, were of a most delicate rosy purple; the lip measured two-and-three-quarter inches across its widest part, and was of a most intense rosy purple colour, margined with pale rosy purple, the whole being in fine contrast to the two large yellow eyes at the entrance of the throat. We must congratulate M. Picot upon being so fortunate as to flower so fine a variety.—B. S. W.

VANDA CATHCARTII .

VANDA CATHCARTII.

[Plate 168.]

Native of hot valleys in the Eastern Himalayas.

Epiphytal. *Stems* terete, of scrambling habit, almost as thick as one's little finger, throwing out stout roots from its lower parts. *Leaves* distichous, linear-oblong, keeled, unequally bilobed, the lobes rounded, falcate, recurved, six to eight inches long, of a rather light green colour. *Peduncles* axillary, bearing a raceme of from three to six flowers, which are stout and shortly-stalked, with short broad sheathing bracts. *Flowers* nearly or quite three inches across, roundish in outline, leathery, remarkable for the close-set transverse bars of colour which mark the sepals and petals, and for their peculiar position, the dorsal sepal being erect, exactly opposite the lip, while the petals and lateral sepals spread out to the right and left in parallel curving lines; *sepals* concave, oblong-obtuse, pale yellow, lined closely with transverse bands of dark crimson-brown, the lines slightly curved, so as to give the whole an appearance of concentric marking, the dorsal one erect, the lateral ones decurved, the exterior surface white; *petals* similar to the sepals in form, texture, and colour; *lip* somewhat shorter, three-lobed, the lateral lobes small, semicircular, incurved, white, striated and spotted with crimson bars, the middle lobe larger, with two crimson stripes down the centre, the front portion cordate-obtuse, yellowish white, with the incurved downy margins bright yellow. *Column* prominent, green, stained with purple-red, the tip bright yellow.

Vanda Cathcartii, *Lindley, Folia Orchidacea*, art. Vanda, No. 17; *Hooker, fil., Illustrations of Himalayan Plants*, t. 23; *Id., Botanical Magazine*, t. 5845; *Illustration Horticole*, t. 187; *Flore des Serres*, t. 1251; *Jennings, Orchids*, t. 10; *Floral Magazine*, 2 ser., t. 66.

Esmeralda Cathcartii, *Reichenbach fil., Xenia Orchidacea*, ii., t. 38; *Id.*, in *Walpers' Annales Botanices Systematicæ*, vi., 871.

Arachnanthe Cathcartii, *Bentham and Hooker, Genera Plantarum*, iii., 573.

There can be no doubt that the *Vanda* we are now about to describe is one of the most distinct of this fine genus. It is not only distinct in its inflorescence but also in its manner of growth, especially when well grown, as that plant was from which our drawing was taken, some time ago, in the well-known collection of Sir Trevor Lawrence, Bart., M.P., who flowers it very freely. We have also seen a well-grown specimen in the collection of G. Heriot, Esq., of Highgate, under the care of Mr. Aldous, the gardener, who exhibited it at the Royal Horticultural Gardens, with four spikes of its curiously showy blossoms.

Vanda Cathcartii is an evergreen species, resembling *Renanthera* in its appearance. The stems attain several feet in height, and produce from the leaf

axils, its drooping racemes each bearing four or five large roundish concave flowers. The sepals and petals are pale yellow, striped with transverse lines or bands of reddish brown, and the lip is bordered with yellow. It flowers at different seasons of the year, and lasts for several weeks in beauty.

We find this species does well in a pot, as it is tall-growing, and requires a stick to support the stem. Some sphagnum moss may be used, with charcoal intermixed, as an inducement for the roots to cling to it, and, moreover, it helps to keep the moss open. The pots should be three-parts full of broken crocks, in order to secure perfect drainage, which is one of the most essential points in Orchid cultivation. We find this species grows well at the cool end of the East India House, with plenty of light, but shaded from the burning sun. It requires to be kept moist during the summer season, as it throws out roots up the stem, and requires sustenance; the moisture should be applied with a fine rose syringe.

This plant requires most cautious washing if there should be any insects upon it. We have seen the foliage turn perfectly black through carelessness in this matter, and the leaves often get broken off owing to want of attention when cleaning the plant.

The New Cattleya House at Chelsea.—We recently had the pleasure of visiting Messrs. J. Veitch & Sons' Nurseries at Chelsea, and there we saw the new Cattleya house, which is a large well-built and well-heated structure. It is 130 feet in length, 22 feet in width, and about 12 feet 3 inches high, with a lantern about 2 feet 6 inches above the roof, where the ventilation is provided for. There are stages up the centre, with side tables, and good tanks under the stages for storing the rain water—in fact, it is a wonderful house, and one that the Messrs. Veitch may well be proud of, as they may, also, of the plants, which are doing well since they have been put into the house.

On the centre stage are some remarkable Cattleyas, such as *C. Trianæ*, *C. Mendelii*, and *C. Skinneri*, making fine growths, both as regards bulbs and flower sheaths. This house seems to suit *Lælia purpurata* also, for the plants are making fine bulbs and sheaths. There were some good Cattleyas in bloom, such as *C. Dowiana* and *C. gigas*, also *Lælia Perrinii* of fine colour. We were glad to see some good Vandas intermixed with the Cattleyas up the centre of the house, as this helps to take off the stiffness of the Cattleyas, and makes a good contrast, the Vandas having a more graceful appearance, on account of their drooping foliage. The side tables are also filled with Cattleyas, and Lælias of smaller size, but making good growths. It is a fine light house, which is, no doubt, what is wanted to secure well-developed and well-ripened stems or bulbs. There are many other Orchid houses at this Nursery, but space will not admit of our mentioning them individually; but we may congratulate the Messrs. Veitch on the success which they have achieved.—B. S. W.

SACCOLABIUM BLUMEI.

SACCOLABIUM BLUMEI.

[Plate 169.]

Native of Java and India.

Epiphytal. *Stems* short, erect, densely leafy. *Leaves* evergreen, distichous, channelled, arcuate, elongate lorate, obliquely truncate at the apex, of a bright green, with a few parallel lines of dark green on the under surface. *Peduncles* axillary, supporting dense pendulous cylindrical racemes as long as the leaves. *Flowers* small but crowded, the inflorescence having altogether a very pleasing effect from its plume-like character; *sepals* ovate, white or slightly tinted with rose, and dotted with magenta; *petals* somewhat narrower, oblong, the colours and markings like those of the sepals; *lip* with a compressed bluntish spur, pubescent within, elbowed, the lamina roundish oblong, ciliated, recurved and emarginate at the tip, costate on both surfaces, of a soft pleasing shade of deep magenta-rose, which gives a bright and handsome appearance to the plants. *Column* small, white, beaked.

Saccolabium Blumei, *Lindley, Botanical Register*, 1841, misc. 115; *Id., Sertum Orchidaceum*, t. 47; *Illustration Horticole*, t. 545 (var. *majus*); *Pescatorea*, t. 21 (var. *majus*).

Rhynchostylis retusa, *Blume, Bijdragen*, 286, "tabellen xlix."

The species of *Saccolabium* rank among the finest of our East Indian Orchids. Their compact habit of growth, their graceful drooping foliage, and their charming arching plume-like spikes of blossoms have such a noble and striking appearance as to win for them general favour. The species which we now figure is a most distinct and beautiful one, of which there are many varieties, differing in the size and colouring of their flowers and the length of their flower-spikes, and also in the dimensions of their foliage. We hope to figure some of these different varieties as time passes on, but we offer this plate as an illustration of the type of the species. Our drawing was taken from a fine plant that produced several spikes eighteen inches in length, in the collection of C. J. Partington, Esq., Heaton House, Cheshunt. This plant, as well as many others, are grown remarkably well under the care of Mr. Searing, the gardener.

Saccolabium Blumei is an evergreen species, with dark green foliage, of a pendulous character, about ten inches in length. The racemes of flowers proceed from the axils of the leaves on opposite sides, and when the plants are in vigorous growth they extend to the length of eighteen or twenty inches; the flowers are white, spotted with rosy purple, the lip bright rosy purple. It flowers during

August and September, or sometimes later, and continues in bloom about three weeks if kept free from damp.

This plant requires the treatment of the East India House, where it may be shaded from the hot sun but can obtain plenty of light. It is best grown in baskets suspended from the roof, as the roots then have a chance to throw themselves into the air, and suck up the moisture that is diffused through the atmosphere of the house, in which they greatly delight. This is the most natural way to grow them, and when hung up in this way they have a good appearance, with their quaint-looking roots dependent from the plants. They also succeed well in pots with plenty of drainage. In this latter way they are more convenient for exhibition purposes, but for home decoration we prefer the baskets. If cultivated in pots they require to be placed as near the light as possible, so that they may have the full benefit of it, in order to make their growths stronger, and that they may bloom more freely.

We find good live sphagnum moss, with some charcoal intermixed, to suit them; they must have good drainage, and a moderate supply of water during the growing season, never being kept too wet; we merely allow the moss to be in a moist condition so as to keep it growing. When at rest they must not be kept too dry, as these air-plants require more support than those plants that have thick fleshy bulbs to draw upon, and by keeping the moss moist during the resting season the foliage will be maintained in a plump and healthy state. How frequently we see Saccolabiums lose their lower leaves! This is generally caused by drying the plants too much.

Insects should always be avoided, as they soon disfigure the foliage and injure the plants. To secure perfect foliage is the beauty of a plant; fine flowers and bad foliage soon take off both the value and the beauty of a plant.

CYMBIDIUM DEVONIANUM .

CYMBIDIUM DEVONIANUM.

[Plate 170.]

Native of India: Khasya Hills.

Epiphytal. *Pseudobulbs* small, roundish-oblong, clustered, invested by the dilated sheathing bases of the leaf-stalks. *Leaves* several, evergreen, broadly lanceolate, with a prominent keel beneath, about a foot in length, leathery in texture. *Peduncles* radical, twelve to eighteen inches long, pendulous, clothed at the base with crowded dark brown sheathing scales, and bearing a drooping raceme of rather attractive though scarcely showy blossoms. *Flowers* about one and a half inch across, pale yellowish olive-green, with a purplish lip; *sepals* oblong-lanceolate, acute, pale olive-green, with about five faintly dotted lines of dark purple, the lateral ones not so distinctly dotted; *petals* shorter, ovate acute, of the same colour as the sepals, but more distinctly dotted; *lip* ovate obtuse, shorter than the petals, the tip of the front lobe recurved, purplish red, with a large blotch of deep purple on each side the throat near the margin, furrowed down the centre. *Column* small, green, bent down on the base of the lip.

Cymbidium Devonianum, *Paxton, Magazine of Botany*, x., 97; *Lindley, Gardeners' Chronicle*, 1843, 431.

There are but few species of this genus that are really good and effective for ornamental purposes, and yet some of them are most chaste and beautiful. We have already figured two meritorious ones, and there are others, such as *Cymbidium eburneum*, *C. Mastersii*, *C. Lowii*, &c., which we hope to introduce to our readers in due time. The species now before us is a very pretty little plant, not so showy as those just named, but it is both elegant and of small-growth, producing abundantly its well-furnished spikes of flowers, which, we fancy, are well worth the attention of cultivators, being so very distinct from those of other kinds. Our drawing was taken from the grand and extensive collection of W. Lee, Esq., Downside, Leatherhead. The plant flowered last year, which was the first time we had seen it, for it is quite rare. Mr. Woolford, the gardener, grows it in the Cattleya house.

Cymbidium Devonianum is an evergreen species, with small pseudobulbs and light green foliage, which grows about ten inches high. The flower-stalks proceed from the side of the bulbs, after they have finished their growth. The sepals and petals are of a pale green, spotted with purplish brown, and the lip is crimson,

with two large blackish purple spots on either side towards the centre or disk. It blooms in June and July, and continues in beauty for two or three weeks.

We find this plant does well grown in rough fibrous peat, with good drainage, and a moderate supply of water during the growing season; when the growth is completed less moisture will suffice—just sufficient to keep the bulbs plump. When it begins to show blossoms the moisture about the roots should be increased, to induce the flower-spikes to develope to better advantage.

Lælia pumila spectabilis.—This beautiful variety has been sent to us by A. Curle, Esq., of Prionwood, Melrose, and we must congratulate him upon obtaining such a startling novelty. The flower to hand is larger than those of *Lælia pumila* usually are; the sepals and petals are of a dark rosy purple, beautifully mottled and lined with rich mauve-purple, the markings in most instances following the veins of the flower. The effect of this mottling is charming.—B. S. W.

Lælia autumnalis.—In the Victoria and Paradise Nurseries there is flowering at the present time a wonderful and gigantic specimen of this Orchid. The plant has 450 pseudobulbs, and 24 flower-spikes. It is growing on a large block of wood, and is doing well. Some of the spikes are developing as many as eight to ten flowers on the spike.—B. S. W.

ODONTOGLOSSUM VEXILLARIUM SUPERBUM

ODONTOGLOSSUM VEXILLARIUM SUPERBUM.

[Plate 171.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* small, narrow oblong, compressed, clothed by the distichously sheathing bases of accessory leaves. *Leaves* elliptic-lanceolate acute, slightly keeled beneath, of a pale green colour. *Peduncles* radical, in the axils of accessory leaves, often several from one pseudobulb, slender, nodding, terminating in a raceme of several flowers of the most superb colour. *Flowers* large and showy, measuring three to four inches from tip to base, and two and a half inches or more across; *sepals* obovate-oblong acute, somewhat recurved, over an inch in length, of a lovely pinkish rose, and with the somewhat larger oblong spreading *petals*, which are of the same colour, all directed upwards above the median line of the flower; *lip* very large, standing opposite the sepals and petals, transversely roundish oblong, with a deep notch in front, the base contracted into a short unguis or claw, and marked by a triangular white area, on which is displayed a peculiarly-formed dark purple-red spot, which breaks out into three thin club-shaped lines extending towards the front, and, with several shorter lines on each side, all displayed within the area of white; the rest of the surface, to within about one-eighth of an inch of these lines, is of a peculiarly deep and vivid rose colour. *Column* small, yellow, with acute crimson wings, margined with white.

Odontoglossum vexillarium superbum, *Reichenbach fil.*, in *Gardeners' Chronicle* n.s., xvi., 364.

This really superb variety of *Odontoglossum vexillarium* is the most distinct that has come under our notice, notwithstanding that we have seen and bloomed many of a very charming character, varying much in colour and in the size of their blossoms. They are all remarkably free in producing flowers, as well as in making growth, if they are properly treated. Our drawing of this new variety was taken from a specimen in the fine collection of Sir Trevor Lawrence, Bart., M.P., of Burford Lodge, Dorking, whose numerous glass houses abound in rare and valuable species of Orchids.

Odontoglossum vexillarium superbum is of evergreen habit, and resembles the type in its growth and foliage. The flowers are of a brilliant pinkish rose, having a large radiating blotch of brownish purple at the base of the lip. This plant blooms in the autumn months, and lasts in beauty for three or four weeks. It is a most attractive variety, and one that all growers would, we have no doubt, like to

procure. We believe this to be one of the prizes which now and then are secured in purchasing imported Orchids *en masse.*

There is no doubt it requires the same treatment as the type, that is, it should be grown in the warm part of the cool Odontoglossum house. Mr. Baxter, the Orchid grower at Burford Lodge, cultivates it in the Odontoglossum house. When we paid a visit to this establishment, in June, the plants were fully in bloom, and among them were many good forms, including some grand spikes of blossom. They were grown in pots, with peat and some sphagnum moss. These plants should have perfect drainage, as they require water throughout the year, and when in vigorous growth they require more than at other times. The pseudobulbs should be well elevated above the pot rims, so that the roots can work over the surface as well as into the soil, and a few lumps of charcoal should be introduced amongst the peat. They delight in having their foliage frequently syringed, to keep down insects, such as the red thrips—we dip them in water to keep these insects in check—as if the plants are allowed to become infested they go bad and dwindle away. If kept free from insects they are of easy cultivation, and soon grow into specimens which will repay all the trouble taken, by the quantity of flowers they will produce.

VANDA INSIGNIS

VANDA INSIGNIS.

[Plate 172.]

Native of the Mountains of Timor.

Epiphytal. *Stems* suberect, leafy, throwing out thick fleshy roots below. *Leaves* distichous, evergreen, linear, recurved, channelled, bifid and obliquely incised and toothed at the apex, of a deep green colour, rigid and leathery in texture. *Peduncles* axillary, erect, green, bearing a short five to seven-flowered raceme. *Flowers* two to two and a half inches across, the pedicels white or whitish; *sepals* obovate spathulate obtuse, bright ochraceous golden or Indian yellow, nearly covered with dark brownish crimson spots and blotches, confluent towards the tips, yellowish externally; *petals* similar in form, colour, and marking; *lip* somewhat fiddle-shaped, the basal part subovate, white, with two short auricles or lateral lobes, and two low ridges on its disk, above narrowed, and then suddenly expanding into a semilunar concave limb, one inch broad, of a beautiful deep rose colour, the margin rounded and entire; *spur* compressed, obtusely conical, recurved, its mouth furnished with two rounded white lobes. *Column* short, terete, pinkish white, bent over the mouth of the spur.

Vanda insignis, *Blume, Rumphia*, iv., 49, t. 192, fig. 2, *and* t. 197 *b*; *Lindley, Folia Orchidacea*, art. Vanda, No. 7; *Id., Paxton's Flower Garden*, ii., woodcut under t. 42.

We are pleased to be able to figure this beautiful and distinct *Vanda*, which has been very rare for many years. We are glad, however, to find that some good importations have been received within the last few years, and this will bring it within the reach of all who are fond of these plants. This species does not make such fine specimens as *V. suavis* and *V. tricolor*, but is very compact-growing, and takes many years to grow into a specimen. It has, however, its good qualities, as it flowers in a small state, and takes up comparatively little room. For the specimen here represented we are indebted to E. Wright, Esq., Gravelly Hill, Shepherds' Green, Birmingham, who has flowered it in great perfection. Mr. Hodges, the gardener, has been growing Orchids for many years at this place, and has reared some very fine specimens.

Vanda insignis is an evergreen plant, with dark green recurved foliage, spread out in two ranks, and growing about ten inches in length. The flower-spikes proceed from the axils of the leaves, and are also about ten inches in length, erect, with an average of six flowers in a raceme; the sepals and petals are tawny yellow,

spotted with light brown, the lip large, much incurved, with a concave front lobe of a light rosy purple colour. It blooms during the summer and autumn months, and lasts several weeks in beauty.

This *Vanda* requires the same temperature as the other eastern species, that is, the heat of the East India house. With us it does well in a basket, suspended from the roof, where it gets plenty of light, but is shaded from the hottest sun. We find sphagnum moss and good drainage to suit it well, but it requires very little material about its roots, and a few lumps of charcoal intermixed with the moss prove to be a great inducement for it to put forth new roots more freely, as they seem to enjoy it; the moss must be fresh and in a living state, indeed, the material must never be allowed to get into a bad or sour soddened condition, which is a great deterrent to all Orchids as well as other plants. Cleanliness is one of the greatest virtues in plant culture. This plant requires a moderate supply of water in the growing season, and even when at rest the moss must be kept rather moist. It will thrive also on a block of wood or a raft, but when growing on these it requires more moisture, which is best applied by syringing every fine day, or twice a day in summer, in order that the blocks may never get too dry.

Cypripedium Godefroyæ.—This distinct novelty has recently flowered with Baron de Rothschild, at Ferrières, France, and with W. Lee, Esq., Downside, Leatherhead. Mr. Bergman, gardener to Baron de Rothschild, was kind enough to send us materials for figuring the plant, which we hope to do shortly for the benefit of our subscribers. In habit of growth this species resembles *Cypripedium niveum*, in fact the two plants, when not in blossom, are undistinguishable the one from the other; the flowers, however, though similar in shape to those of *C. niveum*, are totally distinct, being heavily spotted both on the front and back of the sepals and petals with rich purplish brown; the lip is also slightly spotted. In Mr. Lee's flower the spots towards the centre of the petals were so numerous as to form a broken line from base to tip, but in Baron de Rothschild's flower this peculiarity was not apparent. This plant was introduced from Cochin China by M. Godefroy-Lebœuf, of Argenteuil, France.—H. W.

LAELIA PEDUNCULARIS.

LÆLIA PEDUNCULARIS.

[Plate 173.]

Native of Mexico.

Epiphytal. *Pseudobulbs* clustered, roundish-ovate, obtuse, compressed, with an elevated line on each side. *Leaves* solitary, oblong obtuse, four inches long, folded at the base. *Scape* ten inches or a foot high, rising from between the folded base of the leaves, terete, with distant lanceolate sheathing bracts below. *Flowers* large and showy, in a dense six-flowered corymbiform raceme which droops gracefully from the slender elastic scape, of a uniform dark rosy tint of magenta-purple, the pedicels nearly two inches long, having an ovate acute bract at the base; *sepals* lanceolate-oblong acute; *petals* oblong ovate, slightly jagged at the edge, of the same colour as the sepals; *lip* large and prominent, three-lobed, the lateral lobes short, roundish, folded over the column, subrepand, obtuse, with the front slightly toothed, the middle lobe oblong, bluntly rounded and recurved at the apex, subrecurved, deep rosy magenta, like the other parts of the flower, the disk, with two to four elevated lines, marked just within the throat with a feathered spot of very deep purple-crimson, and having in front of this eye-like spot a small blotch of creamy yellow. *Column* short, enclosed.

Lælia peduncularis, *Lindley, Botanical Register*, 1842, misc. 10; *Id.*, 1845, t. 69.

Bletia peduncularis, *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi. 426.

This rare species of *Lælia* has been known for many years. We originally met with it in the collection of the late J. Aspinal Turner, Esq., M.P., Pendlebury, Manchester. From Mr. Turner's plant originated, many years ago, the specimen from which our plate was produced. This plant is in the possession of R. F. Ainsworth, Esq., M.D., of Lower Broughton, Manchester, to whom we are indebted for the permission granted to our artist to take his sketch. We have noticed this beautiful species flowering annually for a considerable time in this well-known collection, from which there have been many fine specimen Orchids shown at the Royal Botanic Gardens, Old Trafford, and many of the leading Orchid prizes have been taken by Dr. Ainsworth's gardener, Mr. Mitchell. There have been plants imported for this species, but we have not seen any which accord with our present subject; we do hope, however, there may be some that will prove true, as it is so well worthy of cultivation, taking up but little room and being of a most pleasing colour, as well as useful as a single coat flower.

Lælia peduncularis is a compact evergreen plant, with flattish pseudobulbs,

about two inches in height, bright green leaves and racemose flowers, which are produced after the bulbs have completed their growth. The flower scape attains the height of about ten or twelve inches. The sepals and petals are of a beautiful rosy purple, the lip large, of the same colour, with a large blackish purple eye. It flowers during November and December.

This plant in its growth resembles *Lælia acuminata*, with the exception that the pseudobulbs of the latter are more tapering, and not so broad and round. It makes a nice companion plant to *L. acuminata*, which is white, and blooms at the same time.

We find the species before us does well in the Cattleya house. Mr. Mitchell grows this plant in the way which we ourselves adopt, namely, in a small basket suspended from the roof of the house, as near the glass as possible, using for compost rough fibrous peat, well drained, a few lumps of charcoal being placed around the roots to induce them to grow more freely. The plant requires very little material to grow in, and needs only water enough to keep the material moist during the growing season, and when the bulbs have completed their development just sufficient to keep them plump. When the scape and flower buds begin to appear, a little more water may be given to encourage the development of the flowers. They require but little shade, merely enough to prevent the sun from scorching the leaves, and in order that they may keep of a good colour, as it is a great element of the beauty of a plant to have good foliage as well as good flowers.

Plants of this class do not like to be disturbed when once they are established in their baskets. If they really require fresh material, take out the old soil carefully and pour some water among the roots, which will clear them from any decayed matter that may be about them; then see to the drainage, and give them fresh sweet material of the kind already recommended, and also bear in mind to keep them free of insects.

Cattleya labiata Percivaliana.—There was at the January meeting of the Royal Horticultural Society a wonderful variety of this novelty, undoubtedly the finest that has been seen, being much larger and brighter in the lip than usual. It was exhibited by Baron Schröder, The Dell, Staines, from whose fine collection also came *Odontoglossum Schröderianum*, a grand Odontoglot, with remarkably large bright red blotches, superior both in its markings and colour to *O. Chestertoni*.—B. S. W.

J.Nugent Fitch delet lith

B.J.Williams Imp.

DENDROBIUM CRUENTUM.

DENDROBIUM CRUENTUM.

[Plate 174.]

Native of the West Coast of the Malayan Peninsula.

Epiphytal. *Stems* erect, rather slender, terete, furrowed, about a foot long, tapered towards the apex, and also towards the bulbiform base, the leaf-sheaths investing the internodes nigro-hirsute when young. *Leaves* oblong, bilobed, of a deep green. *Peduncles* two-flowered, produced on the ripened leafless stems, the pedicels with brownish lanceolate bracts at their base. *Flowers* medium-sized, green and crimson; *sepals* triangular-ovate acuminate, about seven-ribbed, keeled on the outer side, the lateral ones connate at the base, and produced into a bluntish chin, pale yellowish green, with longitudinal veins of deeper but pale bright green; *petals* narrow lanceolate acuminate, about three-ribbed, reflexed, of the same colours as the sepals; *lip* deeply three-lobed, the lateral lobes erect, falcate-oblong, wholly crimson, the front lobe ovate apiculate, the sides elevated, with a minutely muriculate border, very pale green, with darker green veins, as in the other parts, but with a margin of crimson extending forwards nearly to the apex, and having on the disk, extending fully half way down the centre of the lip, a large oblong tumid crimson crest or callus, gyrose in front, and passing into five blunt ridges. *Column* erect, tridentate at the apex, green with crimson margins.

Dendrobium cruentum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xxi., 604; *Id.*, xxii. 456.

The *Dendrobium* we now figure is a new and pretty species, one which we are therefore glad to be able to bring under the notice of our readers, since it is worthy of cultivation both on account of its distinct character and peculiar colouration. We have many wonderfully fine species belonging to this genus, showy and free-blooming kinds, well adapted to ornament our stoves and Orchid houses, and among them are many with flowers of very beautiful and striking colours, which make them especial favourites. Our present subject, though scarcely ranking with the first-class showy species, is nevertheless one of very pleasing aspect, and likely to win the favour of Orchid growers. We are indebted for the materials which supplied our illustration to R. H. Measures, Esq., of The Woodlands, Streatham, whose collection we were glad to find, when we had the pleasure of visiting it, contained many rare and valuable species of this very ornamental order of plants.

Dendrobium cruentum is quite a novelty. In its mode of growth it resembles *D. Jamesianum*, producing its flowers from the nodes along each side of the slender nigro-hirsute stems. The sepals and petals are of a yellowish green, reticulated with a deeper tinted bright green, and the lip is pale green, edged with brilliant

crimson-scarlet, its side lobes and its prominent crest being also of a bright crimson-scarlet. The flowers are produced during September and October.

This Dendrobe, which comes from the west coast of the Malayan Peninsula, as we learn from Mr. F. Sander, "grows naturally on small trees, at about six feet from the ground, and not far from the coast line, where it is exposed to the full sun. It requires a hot and dry rest from October till April."

Mr. Howe, the gardener, grows this plant in a pot, with fibrous peat and sphagnum moss, well drained, and suspended from the roof in a warm house with other Dendrobes. It requires the same treatment as others of its class. The great secret of success in the cultivation of Dendrobes is to give them a good season of growth, and to let them go on without check until the growth is completed, after which they require a season of rest. When they begin to flower they require nourishment, which should be given them in the form of more moisture. When the blooming season is over they generally begin to grow; this is the time to place them, with fresh material, in pots or baskets, should they require it; if not a little fresh material should merely be put about them without disturbing their roots. This will encourage them to root more freely. As our seasons are short, nothing should be left undone that would tend to invigorate them, in order that they may make good ripened stems for flowering the next year. Another important matter affecting their well being is to keep them free from insects. Many of the Dendrobiums are short-lived, especially if they are neglected, and when this is the case they often die through the remedy being too late of application.

Odontoglossum Josephinæ.—There is now flowering, in the collection of R. H. Measures, Esq., Streatham, a fine new Odontoglossum of great beauty, and undoubtedly a mule between *Odontoglossum gloriosum* and *O. Alexandræ*. It has sepals and petals after the shape of those of *O. Andersonianum*, and a lip like that of *O. Alexandræ*. The flowers are white, the sepals faintly marked with rose, and the whole of the flower distinctly spotted with chestnut-brown. The variety is named after Mr. Measures' youngest daughter.—B. S. W.

ODONTOGLOSSUM PESCATOREI.

[Plate 175.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* stout, ovate, slightly ribbed, diphyllous. *Leaves* lorate acute, plane, narrowed to the base, keeled behind. *Peduncles* springing from the axil of accessory leaves, supporting an erect, diffuse, many-flowered panicle, two to three feet long, of numerous charmingly-tinted blossoms, which have small ovate scarious bracts at the base of their pedicels. *Flowers* rather large and of semi-transparent texture, white, delicately flushed with rosy purple, and having a yellow blotch at the base of the lip; *sepals* ovate oblong, apiculate, slightly undulated, spreading, over an inch long, white, with a bar of delicate rosy purple down the centre of each; *petals* similar to the sepals in outline, but much broader, and more distinctly undulated, pure white; *lip* white, stained with yellow at the base, cordate-oblong, subpandurate, cuspidate, the margin crispy, the base denticulate, the disk bearing two broad lacerated lateral appendages, which are closely striated with crimson, and between them a yellow crest, consisting of two divergent lamellæ, which are toothed at the apex and marked by one or two small red spots. *Column* white, with a pair of short lacerated wings, which are stained with crimson.

Odontoglossum Pescatorei, *Linden, Catalogue; Id., Pescatorea*, t. 1; *Lindley*, in *Paxton's Flower Garden*, iii., t. 90; *Id., Folia Orchidacea*, art. Odontoglossum, No. 56; *Lemaire, Jardin Fleuriste*, iv., t. 331; *Bateman, Monograph of Odontoglossum*, t. 5; *Warner, Select Orchidaceous Plants*, i., t. 23.

Odontoglossum nobile, *Reichenbach fil., Linnæa*, xxii., 850.

There is no doubt the species we now bring before our subscribers is one of the most useful and beautiful of Orchids, one of those which every person can and does admire for the intrinsic charms to be found in its fascinating panicles of flowers. The blossoms of this species vary comparatively little from each other, except as regards their spotting and the form of the individual flower or its parts, but some are larger-flowered than others, and some have more freely branched panicles. We have, indeed, gained some few new forms during the last two years, and magnificent additions they are, especially that named *Odontoglossum Pescatorei Veitchianum*, a splendid variety, already figured in the *Orchid Album* (vol. ii., t. 68), and another of similar character called *O. Pescatorei Schröderianum*, of which we hope to give an illustration at some future time.

Our drawing of the typical *Odontoglossum Pescatorei* was taken from a fine specimen in the well-grown collection of H.R.H. the Prince of Wales, at Sandringham. His Royal Highness is a great admirer of Orchids and other good plants, and

Mr. Penny, the able gardener, is one of our best cultivators, as is proved by his having taken the leading prizes at our London shows in former years when he was a resident in the metropolis, and a frequent exhibitor.

Odontoglossum Pescatorei is an evergreen species, with dark green pseudobulbs, and strap-shaped leaves, about ten inches in height. The inflorescence, which is generally of branching habit, that is paniculate, produces an abundance of flowers, of which the sepals and petals are white, the former tinged with pale rosy purple along the centre; and the lip is white, with a little yellow on the disk. It blooms at different times of the year, according to the period of the completion of its growth, coming into flower when the growth is finished, and continuing for six weeks in beauty.

This species requires the same treatment as *Odontoglossum Alexandræ*. A cool house is suitable for it, and by having a number of plants they can be brought into blossom at different times—in fact, with judicious management, the flowers may be had all the year round.

These two plants, *Odontoglossum Pescatorei* and *O. Alexandræ*, are the most useful and beautiful Orchids we have for decorative purposes. Moreover, when cut, the flowers last a considerable time in a room, if fresh water be frequently given them, or if a small piece of charcoal be placed in the water to keep it sweet. It is also a good plan to cut a small piece off the end of the stem after it has been some time in water, as this seems to put new vigour into the flowers, by reopening the channels through which they draw a supply of the nourishing fluid.

Orchids grown by H. Shaw, Esq., Buxton.—In November last we paid a visit to Mr. Shaw's residence, which is a very pretty place, most charmingly situated on the side of a hill overlooking Buxton, and the surrounding parts of Derbyshire. The collection of Orchids, of which family Mr. Shaw has been a patron for many years, contains some fine specimens, which we have seen and noticed from time to time when visiting Buxton. We will mention a few fine examples which we saw in bloom, and others that were then showing flower spikes:—A grand plant of *Cypripedium Harrisianum*, about three feet in diameter, and bearing forty or more fully expanded blossoms, which were well coloured, some of the scapes bearing two flowers. A grand plant of *Epidendrum vitellinum majus*, which was producing several long spikes of its brilliant orange-scarlet flowers. A fine variety of *Cypripedium hirsutissimum grandiflorum*. The rare *Dendrobium album* in bloom—a very useful species. There were also some good examples of *Phalænopsis*, and other East Indian Orchids; besides a very fine variety of *Zygopetalum Mackayi*, a good old Orchid, valuable for winter blooming. In the cool Odontoglossum house there were some good plants of *Odontoglossum Alexandræ*, with fine branching spikes, and others of *O. Pescatorei*, their graceful panicles decorated with many flowers. Amongst many other good Odontoglots was a remarkable plant of *O. nævium majus*, with many bulbs and growths.

(*Concluded under Plate* 176.)

CYRTOPODIUM CARDIOCHILUM

CYRTOPODIUM CARDIOCHILUM.

[Plate 176.]

Native Country not known.

Terrestrial. *Stems* stout, fusiform, more or less curved, three to four feet in height, jointed, the internodes covered by the membranaceous sheathing bases of former leaves. *Leaves* dark green, numerous on strong erect growths, linear-lanceolate, acuminate, plicate, the bases investing the internodes of the stem, one-and-a-half to two feet long, and an inch-and-a-half in breadth, the plant thus becoming palm-like in character. *Scapes* radical, elongate, with a few distant bracts, terminating in a (forked) many-flowered raceme, the flowers seated each in the axil of an ovate concave boat-shaped membranaceous yellowish bract as long as the pedicels. *Flowers* showy, an inch-and-three-fourths in diameter, the principal branch of the raceme bearing eighteen or twenty blossoms, the buds globular, tinged with brown externally; *sepals* spreading, roundish oblong, apiculate, narrowed at the base, yellow, flushed with green; *petals* of similar size and form, spreading, of a clear bright chrome-yellow; *lip* sessile cordate, three-lobed, the lateral lobes roundish oblong or acinaciform, elevated so as partially to hide the decurved greenish column, the front lobe deflexed and incurved, roundish cordiform, suddenly enlarged from the narrowed isthmus, concave, the front margin entire; at the base of the lip is a convex cushion-like warted crest. *Column* pale yellowish green, deflexed.

Cyrtopodium cardiochilum, *Lindley, Journal of the Horticultural Society of London*, iv., 266; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 666.

Cyrtopodium is a small genus of Orchids, and one which is not in great favour among Orchid growers, though some of the species when well grown are really noble objects, and are decidedly worth cultivating. That which we now illustrate and describe, *C. cardiochilum*, is a showy kind when in bloom, its branching spikes of yellow flowers and noble bulbs, with palm-like foliage, being very effective, as well as distinct in character. There is another species, *C. punctatum*, which is one of the most noble of Orchids for exhibition purposes. We exhibited this some years ago at the Horticultural Society's Shows, at Chiswick, &c., and at that time the late Dr. Lindley remarked what a grand plant it was for flower show purposes. We also exhibited one, some nineteen years ago, in the large conservatory at the Manchester Botanical Gardens, and it was the admiration of all the visitors to the show, its noble growth and fine branching panicles of red-spotted yellow flowers, having a very grand appearance. This we hope to figure at some future time when we can meet with it in blossom. We have seen other fine examples exhibited, but the plants seem to have gone out of fashion, and hence, perhaps,

out of favour, which is probably the reason that they are now so little known. *C. punctatum* is, however, deserving of all the care that can be bestowed upon it. Some persons seem to think these plants are difficult to flower, but in this respect they resemble most other Orchids: if they are not well grown they do not give the desired results. Our drawing of *C. cardiochilum* was taken from a grand specimen in the collection of S. K. Mainwaring, Esq., Oteley Park, Shrewsbury, where it blossomed under the care of Mr. Bland, the gardener, who is known to be a most successful cultivator of plants.

Cyrtopodium cardiochilum has tall fusiform stems, which grow about three feet high, and are clothed towards the top with foliage of a palm-like character. The panicles of flowers are produced from the base of the stem, on a distinct scape, at the same time as the young leaf-growths make their appearance; this scape attains the height of four feet, and its ramifications continue to develop flowers for some time. The sepals and petals and lip are all yellow, the sepals being tinged with green. It flowers during the spring months.

This plant requires plenty of pot room, as it is free-rooting. It is best grown in rough fibrous loam, and the addition of a little rotten dung will help its growth. It must have good drainage—about two inches in depth—and during the growing season it should be kept in the East India house and supplied with plenty of water, when it will make its roots freely, but the young growth should not be wetted, as this might cause it to rot. After the growth is completed it should be removed to the Cattleya house, keeping it rather dry until it again commences to grow and to flower; when this occurs it may be replaced in the East India house, and a little water should be given to encourage the leaves and flower-spikes to develope to advantage.

These Cyrtopods will repay all the care that may be bestowed upon them. They should have all the light that can be given them, requiring shade only when the sun is very powerful.

Mr. Shaw's Orchids. (*Continued from Plate* 175.)

We saw here, suspended from the roof, a grand plant of *Masdevallia Chimæra*, which had produced no less than thirty flowers hanging from the basket in which it grew, and which had a fine effect; the curious yellow and brown-spotted blossoms of this plant, with their long tails, have quite a quaint appearance. *Sophronites grandiflora* was very showy, and we were glad to see it so well grown. There were some fine Dendrobes, such as *Dendrobium densiflorum* and *D. thyrsiflorum* growing splendidly in the warm part of the Odontoglossum house, where Mr. Shaw told us they had been kept for the past year, and they were remarkably healthy.—B. S. W.

CYPRIPEDIUM GODEFROYÆ

CYPRIPEDIUM GODEFROYÆ.

[Plate 177.]

Native of Cochin China.

Epiphytal or sub-terrestrial. Acaulescent, tufted. *Leaves* distichous, spreading horizontally, ligulate, bluntly acute or emarginate, channelled along the centre, about four inches long, dark green, with irregular blotches of pale green over the upper surface, purplish red beneath, the equitant base greenish, spotted with purple on the outer side. *Peduncle* densely hairy, green, spotted with dark purple dots; *bract* ovate, half the length of the ovary, with a much smaller one opposite to it, both bracts and ovary densely clothed with short white partially deflexed hairs, the bracts and ovary green, the former marked with blotchy purple spots, the latter with smaller purple dots. *Flowers* bluntly triangular in outline, very distinct in character, three inches across the petals; *dorsal sepal* nearly circular, somewhat concave, creamy white with broken longitudinal veins in the central portion, the two sides plain, but appearing blotched from the whole back surface being marked with irregular lines and patches of dark purple, hairy on the outer side, especially near the edges and rib; the lateral united *sepals* smaller, ovate, similarly marked outside; *petals* deflexed, roundish oblong, spreading, flat, ciliate, white, with dark purple spots dispersed in broken and not very regular lines, but fairly covering the surface; *lip* or pouch barely an inch long, ovate, rounded at the end, white, marked over with finer dots or points of dark purple, with similar markings on the inner side and the basal auricles, the infolded part produced downwards into an ovate point spotted like the other parts. *Staminode* medium-sized, heart-shaped, with a dorsal furrow and a central depression stained with yellow, the rest being white spotted with dark purple.

Cypripedium Godefroyæ, *Godefroy-Lebœuf, Orchidophile*, t. 830, with fig.; *Id.*, 1884, 362, with icon. photogr.; *Florist and Pomologist*, 1884, 37, with fig.; *Veitch, Catalogue*, 1884, 18, with fig.; *Garden*, xxv. 396, with fig.; *Williams, Orchid Growers' Manual*, 6 ed., 245.

This charming introduction will be appreciated by all admirers of this singular and now numerous group of Orchids, many of whom will no doubt be glad to add it to their collections. It is one of the most beautiful of the spotted forms, and will be most useful for crossing with other kinds, for if some good spotted hybrids can be produced they will be a great acquisition. We already have some spotted forms in *Cypripedium concolor*, and the charming *C. niveum*, but in our present subject the flowers are much more freely and beautifully marked, while the plant itself is of dwarf habit, like the two species just referred to. We are indebted to M. Godefroy-Lebœuf, of Argenteuil, France, for the introduction of this charming species, which he has named in compliment to his wife.

The example from which our drawing was taken is growing in the fine collection of Baron de Rothschild, Ferrières, France, to whose kindness in permitting us to make use of it we owe our sincere thanks. We have subsequently seen a plant iii the collection of W. Lee, Esq., of Downside, Leatherhead, the flowers of which differed somewhat in their markings from those of Baron de Rothschild's plant. Thus the spots towards the centre of the petals in Mr. Lee's flowers were so numerous as to form a broken line of a rich purplish brown colour, from the base to the tip. This species, like most others, may be expected to differ in varieties in the case of individual plants, but both those we have seen were very lovely. They are also very rare, as there have been but few plants imported alive from Cochin China, a country from which we have of late received some beautiful additions to our Orchid groups.

Cypripedium Godefroyæ is a dwarf evergreen species, with spreading dark green distichous foliage spotted with a lighter green, and growing some five or six inches in length. The flower-stalk proceeds from the centre of the young shoots, and is about five inches in height when the growth is completed. The sepals and petals are very broad, white, heavily spotted both on the front and back with rich purplish brown; the lip is white, more lightly spotted with brown. It blooms during October and November, and lasts several weeks in beauty.

This *Cypripedium* requires the same kind of treatment as *C. niveum*. Mr. Bergman, gardener to Baron de Rothschild, has been very successful with it, as well as with other Orchids which he has under his charge. There are some most wonderful specimens at Ferrières, which we have reported on in the *Album* at various times after visiting this place. The most successful way to grow this *Cypripedium* is to place it in a well-drained pot, the material for potting consisting of rough fibrous peat and small lumps of charcoal mixed together; the plant should be elevated about two inches above the pot rim, so that the roots can run down among the material, which they delight to do, for they require a good supply of moisture in their growing season, and even when at rest the soil should be kept moist. If the plant is well elevated and drained the water will be enabled to pass off quickly, but if, on the other hand, it is allowed to stagnate in the soil, the latter will become soured, which will cause the roots to rot—a condition, we need hardly say, which is highly detrimental to the health of the plant. Indeed, these small-growing kinds require great care, so that the growths may fully develope themselves. We find them thrive best near the light. Wires should be put round the pot, that they may be suspended within a foot of the glass, in the same way as we treat *C. niveum* and *C. concolor*, which are of the same habit of growth. We grow them in the East India house, shaded from the sun.

They are propagated by dividing the plants when they begin to grow, which is after their flowering season. They should not be divided unless in vigorous health. An old growth must be left at the back of the new one which is cut off to form the new plant. After division put them in small pots in a shady place until they begin to grow, using the same material as before recommended. Insects must of necessity be kept under.

CATTLEYA MENDELII JAMESIANA.

CATTLEYA MENDELII JAMESIANA.

[Plate 178.]

Native of New Grenada.

Epiphytal. *Stems* short, clavate as in the type, monophyllous. *Leaves* ligulate-oblong, emarginate, of leathery texture, channelled near the base. *Peduncles* two-flowered, issuing from an oblong bluntish compressed sheath. *Flowers* large, six and a half inches across, very showy; *sepals* lanceolate, entire, three-fourths of an inch wide, of a deep blush, or dilute rosy lilac; *petals* broadly ovate, slightly undulated, four and a half inches wide, of the same colour as the sepals, but "marked at the tips with a bright magenta stripe, widest towards the upper end"; *lip* three inches long, and two inches across the mouth of the basal portion, which is folded over the column, where it is pale yellowish white; the expanded front lobe roundish in outline, deeply bipartite, the apical two-thirds forming a solid blotch of rich dense magenta or amethyst, the upper portion richly shaded orange-yellow, becoming pale or whitish yellow at the edge, which is everywhere elegantly frilled; from the blotch of magenta several lines of the same colour pass down the central portion, and other shorter magenta veins are produced on each side. *Column* as in the type.

Cattleya Mendelii Jamesiana, *Hort.*; *Williams, Orchid Growers' Manual.* 6 ed., 190.

We have no hesitation in saying, that of the genus *Cattleya*, the varieties of the *Mendelii* section rank among the finest of the family. The species has only been in the country a few years, the original one having been flowered by Messrs. Backhouse and Messrs. Low, and named after the late Sam Mendel, Esq., who had a magnificent collection. Since then large importations have been sent by our energetic collectors, which have added greatly to the number of varieties in all colours, from pure white to the brightest magenta-rose and magenta-crimson, nearly all intermediate shades of colour being represented. They are free-growing as well as free-blooming plants.

The variety we now illustrate, *Cattleya Mendelii Jamesiana*, is a most beautiful and showy one. Our artist made his drawing from a finely grown plant in the well-grown collection of Mr. James, nurseryman, Lower Norwood, after whom the variety has been named. *Cattleya Mendelii Jamesiana* is an evergreen plant, with clavate pseudobulbs, and oblong emarginate foliage about fifteen inches in height, the surface being of a lively green colour. The flowers proceed in the usual way from a sheath at the top of the pseudobulb after the growth is completed; the sepals and petals are of a deep rosy blush, the petals having a distinct magenta stripe at the

extremity; the lip is white with the apical portion a deep magenta, and the throat yellow veined with dull purple. It blooms during May and June, and will last three weeks in beauty if the flowers are kept free from damp: but if not, they will probably go spotted, which disfigures them. It makes a fine plant for exhibition purposes.

This class of *Cattleyas* requires the same treatment as that given to *C. Mossiæ*, *C. Trianæ*, and others. We find them do well in pots or baskets with good rough fibrous peat and charcoal mixed together, but perfect drainage must be secured, especially when grown in pots, in which case let them be well elevated above the rim. We have seen them thrive well in live sphagnum moss, which many orchid growers prefer. They must be kept as near the light as possible, using thin shading to moderate the effects of the hot sun, but when the sun is not shining the blinds should always be kept up. A little sun morning and evening will not hurt them, provided it is not powerful enough to scorch or injure the leaves. We always like to see the foliage of a good green colour, for in this largely consists the beauty of a plant, and when in this condition they will produce their flowers freely and of good substance and colour, and the effect must be more satisfactory to those that are fond of such beautiful objects.

Another most important item is to keep the foliage clean and the plants well arranged, that they may show themselves off to the best advantage. The pots should also be kept clean on the outside. Cleanliness is one of the principal features in sound cultivation, and to this extent proprietors must take interest in their plants. If there are good plants they require all the care and attention we have indicated to make the house perfect and enjoyable. When newly imported plants are cultivated let them have a house to themselves, for they spoil the effect of well-grown established plants. In a garden which we visited a short time since, we saw some finely grown Orchids, and a lot of newly imported plants had been bought and introduced amongst them into the houses. The visitors exclaimed, "What a lot of dry sticks to look at!" The owner was himself annoyed after having placed them there, and made up his mind to remove them at once, in which he was quite right, as they are far better in a house by themselves, where they can then be treated according to their wants, which is the proper way, and from which, when they come into bloom, they can be removed to the show house.

ANGRÆCUM KOTSCHYI.

ANGRÆCUM KOTSCHYI.

[Plate 179.]

Native of East Tropical Africa.

Epiphytal. *Stems* short, stout, producing thick fleshy roots from their base. *Leaves* few, distichous, sessile, equitant, broadly ligulate-spathulate, nearly two inches wide, unequally bilobed, leathery in texture, and of a dark shining green. *Scape* radical, dull green, stout, jointed, with dark brown triangular bracts almost encircling it, and ending in a very short point; *racemes* many-flowered, pendulous, the flowers proceeding from the axils of the bracts, with ovaries of a pale reddish or warm cinnamon tint an inch and a half long. *Flowers* about an inch and a half across, with a remarkably long spur; *sepals* creamy white, the dorsal one short ovate projected forwards, the lateral ones narrower and longer, narrow lanceolate, tapering to the base, all acute; *petals* creamy white, rather longer than the dorsal sepal, oblong acute with a broad attachment; *lip* obovate pandurate, that is ovate in front, with raised incurved edges, apparently emarginate from the retroversion of the apiculus, the edges recurved in the basal half, narrowed to the width of the mouth of the spur. *Spur* eight inches long, more or less spirally twisted, slender, of a pale tint of cinnamon-red, with an open mouth where it joins the base of the lip. *Column* short, thick, whitish, with a broad stigmatic hollow.

Angræcum Kotschyi, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xiv., 456: *Id.* 693, fig. 131; *Williams, Orchid Growers' Manual*, 6 ed., 118.

Angræcum Grantii, *Bateman*, fide Reichenbach.

The species we now bring before our subscribers is one of the most graceful and beautiful of the Angræcs, of which genus many have been lately introduced. Our collectors are more fortunate than they were a few years ago in sending them home, which is no doubt owing to the better shipping arrangements which are available, besides which, collectors themselves get about with greater facility than formerly. We remember the late Rev. W. Ellis going to Madagascar and trying to bring home some plants of *Angræcum sesquipedale*, *A. Ellisii*, and others; they had to be carried a long way on men's backs, to the coast, and when there they had to wait for a vessel by which to get them home; all this was very trying to the plants, as they have no thick succulent bulbs to support them, and in consequence of being a long time on the voyage they nearly all perished. Thanks to our trading merchants, we have now better facilities for getting them home, and we may expect many beautiful and new species to be in this way added to our collections.

The *Angræcums* are distinct from other Orchids. Some of them are sweet-scented, which always adds an additional charm to a flower. We are obliged to Lord Rendlesham, of Woodbridge, Suffolk, for the material from which our drawing was taken last year, when the plant bloomed in his grand collection, wherein we have had the pleasure of seeing many other fine specimen Orchids, under the care of Mr. Mills, the gardener.

Angræcum Kotschyi is a rather compact grown evergreen plant, with fine broad green foliage. The flower scapes proceed from the axils of the leaves, forming long racemes of white flowers, the chief peculiarity of which, and that which renders them most curious in aspect, being the long tails or spurs of several inches in length, which are formed at the base of the flower. They have altogether a quaint and graceful appearance, the flowers being white and sweet-scented, the tails or spurs pale cinnamon-brown, and the flower stalks bright cinnamon-brown. It blooms in October and remains some time in flower.

We find this plant, like the other *Angræcums* of the same type, is best grown in pans or baskets suspended from the roof, with good drainage, as they require very little material to grow in, their roots enjoying the moist atmosphere of the house. They are generally found growing on the stems and branches of trees, where they receive the rains and dews that fall, so that either by day or night they always get helped with moisture, which is necessary to their support. In our houses, consequently, they do not like their roots to be too much confined; they like their liberty, and by suspending them from the roof we imitate nature as closely as possible. We find a small quantity of live sphagnum moss, with a few lumps of charcoal in the basket for the roots to adhere to, to suit them. The East India house is that best adapted for them. They require to be kept moist at the roots in their growing season, and when at rest must have sufficient water to keep them in a plump condition, for they must on no account be allowed to shrivel. They will thrive well on blocks of wood, but in this way they require more attention as regards the supply of water at all times of the year.

VANDA SUAVIS.

VANDA SUAVIS.

[Plate 180.]

Native of Java.

Epiphytal. *Stems* erect, sparingly branched, densely clothed with distichous leaves, the ends of which are directed downwards. *Leaves* lorate, flaccid, recurved, obliquely dentate at the apex, leathery in texture. *Peduncles* issuing from the axils of the upper leaves, and bearing somewhat drooping racemes of charming flowers. *Flowers* about three inches across, very fragrant, beautifully spotted, the lip richly coloured; *sepals* spathulate, retrorse, convex, undulate, sub-lobate, roundish at the apex, white, covered with roundish blood-red spots on the broader parts, the spots being drawn out into stripes in the narrower stalk-like portions; *petals* similar, twisted so as to show the white colour of their outer surface; *lip* convex, three-lobed, the middle lobe white, narrow, deeply bifid, the disk with three ribs or costæ, the lateral lobes ovate acute, spreading, and with the central part a rich magenta-purple, the auricles erect, rounded, white. *Column* sharp, thick, white tipped with rose.

Vanda suavis, *Lindley, Gardeners' Chronicle*, 1848, 351; *Id., Paxton's Flower Garden*, ii., t. 42, fig. 3; *Id., Folia Orchidacea*, art. Vanda, No. 9; *Pescatorea*, t. 8 (var. media); *Xenia Orchidacea*, i., t. 12.

Vanda tricolor (a), *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*. vi., 866.

The *Vanda* which we are about to describe is well known to almost everyone who has had anything to do with Orchids, and we have no doubt that it will at once be acknowledged that *Vanda suavis* is one of the best of its class, making a noble specimen plant when well grown. It is one of the freest growing of the species, and also one of the most free to produce flowers, its numerous flower-spikes being unusually well filled.

There are a few new species of this genus recently introduced, some of which we have figured, as, for example, *Vanda Sanderiana* (*see* Vol. iii., Pl. 124), which is a splendid plant and very distinct in its blossoms; but *V. suavis* has an advantage over that species in its free habit of growth, as well as in its free blooming qualities, making noble specimens, and often producing its flower scapes three times a year when it attains the size for blooming. If well cultivated it begins to flower when small—about eighteen inches to two feet high; and when three or four feet high, if strongly grown, the stems will often produce four spikes. If the young offsets are allowed to grow, as many as six or seven stems may be developed on

one specimen, and they will produce many flower-spikes. What can be more effective than this *Vanda*, with its fine graceful foliage and drooping spikes of gay sweet-scented flowers, some of the spikes bearing as many as fifteen blossoms?

We well remember seeing this species exhibited in wonderful condition for the first time by the late Mr. James Veitch, at one of the meetings of the Horticultural Society of London, when they were held in Regent Street. This splendidly bloomed specimen was a surprise to us all, including the late Dr. Lindley, who at that time was the greatest authority on Orchids in this or any other country. This is many years ago, and still *Vanda suavis* holds its own. There have been many varieties of *V. tricolor* introduced since those days, which are quite distinct from *V. suavis*, and which make noble objects. The varieties of these species make good companion plants, some of the varieties of *V. tricolor* being bright in colour, while a few varieties of *V. suavis* have larger spots than others, but otherwise they do not vary much.

The present plate was prepared from a drawing taken from a finely-grown plant, as is shown by our sketch, in the collection of De B. Crawshay, Esq., Rosefield, Sevenoaks, who is a great lover of Orchids, and has many fine specimens and rare kinds in his collection. *Vanda suavis* is a noble evergreen plant, with fine green and graceful foliage; it produces its flower-spikes, often with fifteen flowers on each, from the axils of the leaves on opposite sides, and often three times a year. The sepals and petals are white, spotted with crimson; the lip bright magenta-purple. It blooms at different times of the year, each spike lasting six weeks in beauty, and it is useful for cutting, as each flower has a nice stalk, so that it may be easily used for dress purposes.

Vanda suavis requires the same treatment as that recommended for *V. tricolor* under Plate 77. Sphagnum moss we have found the best material to place about the roots, which, with good drainage, should be kept moist during the summer, giving less water during the winter, just sufficient to keep the plants in a growing state, as they have but little rest, being always either growing or flowering; if allowed to get dry they will lose their bottom leaves.

J. Nugent Fitch. del. et lith.

LÆLIA PERRINII NIVEA.

LÆLIA PERRINII NIVEA.

[Plate 181.]

Native of Brazil.

Epiphytal. *Stems* clavate, sheathed with scarious bracts, somewhat furrowed, yellowish green. *Leaves* solitary, fleshy, oblong-ligulate, emarginate, folded at the base, of a bright green colour, six inches long and an inch and a half wide. *Peduncle* green, two-flowered, issuing from an olive-green lanceolate compressed sheath. *Flowers* six inches across, very delicately coloured; *sepals* white, lanceolate-oblong, from a broad base, bluntish, plane, the lateral ones deflexed; *petals* also white, elliptic-oblong, wavy at the edge, about an inch broad; *lip* rather small, the basal portion rolled up over the column, which it about equals in length, entire at the edge, the front lobe oblong-ovate, proportionally large, frilled at the edge, the undulations continued entirely round the mouth of the tube or throat, the inside of which is of a creamy or very pale sulphur-yellow, while the front lobe itself is of a pretty pale pinkish lilac, this colour extending along the edge so as to form a complete border to the tubular part, and being cut off by a sharply defined curved line just outside the throat, beyond which a few darker streaks pass outwards towards the apex. *Column* white, just reaching to the mouth of the tube.

Lælia Perrinii nivea, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xiii., 264; *Floral Magazine*, n.s., t. 429.

We now bring before our readers one of the most charming of white Orchids—a variety of *Lælia Perrinii*. It is a very rare plant, of which there are but few specimens in cultivation, and these, so far as is known, were from the same source. There have been others sold for the same thing, but, so far as our information goes, they have hitherto proved to be varieties with light rose-coloured flowers, and are not so showy as the original form of the species. That, which is rich in colour, was figured in our second volume, at Plate 60. The variety of which we now give an illustration blooms about the same time as the type, the two contrasting well one with the other, and they bloom, moreover, at a time when Orchids are scarce.

We are indebted to R. H. Measures, Esq., Woodlands, Streatham, in whose select collection the plant bloomed well last year, for the opportunity of preparing our figure, and we must say that, as we saw it in this collection, we were very much charmed by the snowy whiteness of its flowers, which character they maintain until they are quite faded.

Lælia Perrinii nivea is an evergreen variety, and resembles the type in its habit of growth; it is furnished with dark green foliage, and blooms from a sheath

after the growth is completed; the sepals and petals are white, and the lip pale rosy lilac. The flowers are produced during October and November, and continue in beauty for two or three weeks.

The treatment we find suitable for the well-being of this plant is to grow it in the Cattleya house, with the same material as is used for *Lælia Perrinii*. Mr. Measures' plant is grown by his gardener, Mr. Howe, in a pot, with rough fibrous peat and good drainage, and kept as near the light as possible, so that it can ripen its bulbs thoroughly. It then flowers freely, as this plant has done, and the others we have seen under similar conditions have also bloomed very profusely.

Orchid Conference.—It is highly gratifying to find that the Royal Horticultural Society has decided on holding a Conference on Orchids, in May next. We hope that both Amateur and Trade Growers will make a great effort to render the meeting a success, not only by sending plants of interest, but also by taking part in the discussions on the various papers which will be read. The Conference is to last two days, and particulars will be found below.

The popularity of Orchids has been rapidly extending of late years, owing partly to the singular beauty and variety to be found in the many novelties imported, and partly to the very successful hybridisation of these plants, by which many charming and beautiful varieties have been originated. It is intended to give to the Conference a thoroughly representative character, and hence it is to embrace plants in flower and in seed, as well as cut flowers, while the various modes of growth and methods of cultivation, together with the appliances used, are to be brought under notice. Sir Trevor Lawrence, Bart., M.P., will preside. It may be well to add, that the Conference is to last two days, the Orchids being staged in the Conservatory, where the atmosphere will be especially attended to, so as to ensure the safety and well being of the plants; on Tuesday, May 12th, there will be ample opportunity for a general examination of the various subjects presented; and on the following day, May 13th, the Conference will meet in the Conservatory for the Reading of Papers and Discussion, the Chair being taken by the President at 10.30 a.m. precisely. We notice that the Trustees of the Veitch Memorial Fund, have placed Three Medals, with accompanying Prizes of £5, at the disposal of the Conference, to be awarded to the most deserving subjects exhibited.—B. S. W.

PHALÆNOPSIS VIOLACEA.

[Plate 182.]

Native of Singapore.

Epiphytal. *Stems* short or none, a tuft of thick fleshy roots issuing from the crown. *Leaves* few, large, "gorgeous," fleshy, deflexed, broadly oblong, five to six inches long and about three inches wide, bright green with the surface striate. *Peduncle* reaching to a foot in length, and bearing six or seven flowers (in our specimen two-flowered), furnished with green bracts, issuing from between the bases of the leaves, and only just elevating the flowers above them. *Flowers* medium-sized, two inches broad, and about three inches long, peculiar in the arrangement of their colours; *sepals* (dorsal) obovate-oblong acute, an inch long, plane, white or very pale creamy yellow, with a greenish tinge, and purplish-tinted towards the base, the *lateral sepals* deflexed, oblong acute subfalcate, somewhat twisted, the outer half pale creamy yellow like the dorsal sepal, the inner half deep purple, the colours disposed longitudinally; *petals* about the same size, but more ovate, similar in colour to the dorsal sepal; *lip* clawed, three-lobed, the lateral lobes small bifid, yellow tipped with red, and with a golden yellow callus, the front lobe clawed, obovate-oblong apiculate, intense purple-magenta, convex, the margin inflexed at the base, the whole of the front portion bent forwards. *Column* deep purple, projected over the lip.

Phalænopsis violacea, *Teijsman* and *Binnendjik, Plantæ Novæ*, in *Horto Bogoriensi cultæ*,—f. Rchb.; *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., x., 234; *Floral Magazine*, n.s., t. 342.

This, if not a showy plant, is a most compact-growing and pretty species of *Phalænopsis*, one that will be very much admired for its beautiful glossy green foliage, which Reichenbach designates as "gorgeous," while the interesting flowers which overhang it, give to it a very charming appearance. The various large-flowered species that have been introduced during the last few years are no doubt very beautiful, but these smaller-growing kinds are the means of introducing greater variety into our orchid collections, and that now before us, for example, with its richly-coloured lip, is one to which this remark eminently applies. Our artist has taken his drawing from a well-grown plant in the fine collection of R. Warner, Esq., Broomfield, near Chelmsford, but it has been represented in the *Floral Magazine* with a seven-flowered spike, and Professor Reichenbach speaks of it as sometimes having branched racemes a foot long. We ourselves have never seen a plant produce more than two or three flowers on a spike at a time.

Phalænopsis violacea is a compact evergreen species, with bright shining green striated foliage, which grows about ten inches in length, and is of a drooping

character. The flowers proceed from the axils of the leaves, in racemes growing on short scapes, the racemes continuing to produce fresh flowers until the spike is exhausted. The sepals and petals are of a creamy white, the lower half of the sepals being of a light mauve colour; the lip is of a bright mauve, with yellow crests. It blooms during the autumn months, and continues flowering for a long time.

This *Phalænopsis* requires the same treatment as others of its class. The heat of the East India house suits it, and it grows well in sphagnum moss and charcoal mixed together, requiring but little moss. We find the plan of cultivating them in baskets very suitable, as they like to throw their roots out into the moist atmosphere of the house, which is their natural habit. The moss used should always be kept sweet and in a growing condition, as these plants are very susceptible of having sour or bad material about them. They must be carefully shaded from the burning sun, but they like a light place, in order that their foliage may acquire stoutness and firmness, and not grow sappy, as we often see it, which causes the failures in cultivation so prevalent in this genus. We frequently see the plants succeed for a time and then fail. Our opinion is, that they are grown too freely and sappy. The best cultivated plants we have observed, were seen, some years ago at Broomfield, in Mr. R. Warner's collection; they were in a house 40 feet in length, and 20 feet in width, and produced both fine foliage and flower spikes, some—such as *P. Schilleriana*, with a hundred or more flowers upon it, *P. grandiflora*, with very noble spikes, also large spikes of *P. amabilis* and *P. Portei*. We ourselves have exhibited *P. grandiflora* with as many as seventy flowers on a plant; this specimen was exhibited for several years at Chiswick and Regent's Park Shows, and was grown in a house 50 feet long and 24 feet wide, with a mixed collection of Orchids. *P. amabilis* was cultivated by the side of it. We did not then have the chance that Orchid growers of the present day possess, and thought ourselves fortunate in having one good plant of each kind, which had to be made use of for several shows every year. We mention this to show Orchid growers that these plants can be grown mixed with other Orchids. The great thing is to choose young sturdy healthy plants to begin with. We bought a *P. Schilleriana*, last year, that had been grown with a mixed collection of Ferns, Palms, and Orchids, where it took its chance with the rest, and we must say that it is most healthy looking, the foliage of good substance and perfect; it is now showing its branching spikes, and blooms well every year.

Nugent Fecit del et lith

ONCIDIUM JONESIANUM.

ONCIDIUM JONESIANUM.

[Plate 183.]

Native of Paraguay.

Epiphytal. *Pseudobulbs* very small, densely clustered, oblong-ovate, monophyllous. *Leaves* slender, elongate, subulate, tapering to a long acute point, channelled on the upper surface, dull green. *Peduncles* radical, slender, drooping, green, spotted with purple, supporting a long pendent raceme of a dozen or more flowers. *Flowers* very distinct and elegant in character, about an inch and three-quarters across; *sepals* wavy, the dorsal obovate cuneate acute, the lateral more oblong, pale greenish straw colour, with numerous sometimes confluent dark sepia-brown spots; *petals* oblong, narrowed to the base, closely resembling the lateral sepals, of the same colour and marking, finely undulated; *lip* with a broad transversely reniform bilobed blade, pure white, and conspicuously undulated, narrowed behind into a claw-like isthmus, having on each side a roundish yellow auricle, spotted with red; on the disk is a prominent crest, whitish, dotted with red in front, consisting of a blunt-edged erect plate, truncate in front, and with two lateral projections, behind it divides into two blunt lobes, in front of which are several papillæ. *Column* white, with purple spots, and having a very deep stigmatic cavity, and in front a blunt-edged pouch, while right and left of the hollow are a pair of quadrate recurved purple-tipped lobes.

Oncidium Jonesianum, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xx., 781.

The *Oncidiums* are among the most popular of Orchids, and form a most useful group, there being so much variety of colour among them, they are, moreover, valued on account of their lasting qualities and the graceful character of their inflorescence. The subject of the present illustration is very distinct as regards the character of its foliage, as well as in the colouration and spotting of its flowers. We have, indeed, other Oncids with the peculiar quill-like foliage, but they are different in the colouring of their flowers from *Oncidium Jonesianum*, which is new and beautiful, and has only been introduced a short time since from Paraguay by Mr. Horsman. It was flowered in the well-known collection of W. Lee, Esq., Downside, Leatherhead, and from this source our artist made his very satisfactory sketch.

Oncidium Jonesianum is an evergreen plant, with subulate tapering foliage, as represented in our figure; it produces a drooping raceme of flowers, in which the sepals and petals are of a pale yellowish green colour, spotted with brown, and the lip is large and white, with crests of a reddish brown colour. It blooms during September and October, and lasts for some time in beauty.

This is one of the species which takes but little room, and will succeed well on a block of wood suspended from the roof, which situation it fully enjoys, but

grown in this way it requires a rather frequent supply of moisture at the roots. Mr. Woolford, the gardener at Downside, grows it in a pot with rough fibrous peat and good drainage, in the same heat as recommended for Cattleyas.

In potting the plant should be well elevated above the rim of the pot, so that the roots may have free scope to work among the potting material; a few pieces of charcoal introduced into the compost enables them to work about more freely, and the water, moreover, passes away all the more readily, and without getting stagnant. This species does not require much water at the roots, only just sufficient to keep the bulbs and foliage in a plump condition.

Lycaste Skinneri.—We have received two splendid varieties of *Lycaste Skinneri* from Mr. Moore, gardener to W. Pickersgill, Esq., Blendon Hall, Bexley. The flowers are as large as any we remember to have seen. Mr. Moore informs us that on one of the plants from which the specimens were taken, are as many as twelve flowers on the same pseudobulb, a large number considering the enormous size of the individual blossoms. The two varieties are as follows:—

Lycaste Skinneri vestalis. This variety is quite new to us, and is the purest white variety we have seen saving *L. Skinneri alba*, which is pure white. The flower measures seven inches across the sepals, which are one and three-quarters of an inch wide, pure white; the petals are also white, with a faint venation of pale rose on the inner surface; the lip is pure white, with very faint markings of pale rose.

Lycaste Skinneri gloriosa. This variety also measures fully seven inches across; the sepals are large and broad, of a pale pink colour; the petals rich rose colour, more especially on the inner surface, and the lip large, white, marked faintly with rose. It is a very handsome variety.—B. S. W.

CATTLEYA PRYMERIANA.

CATTLEYA BRYMERIANA.

[Plate 184.]

Native of Brazil.

Epiphytal. *Stems* clavate, stoutish, diphyllous. *Leaves* oblong obtuse, broadish, coriaceous, of a full green. *Scape* four to five-flowered, green, spotted with red, issuing from a purplish-tinted compressed oblong acute sheath. *Flowers* full medium size, about five inches in expansion, very distinct in character, showy; *sepals* lanceolate oblong, the lateral ones slightly curved downwards, plane, with a short hard tip or apiculus, bright purplish rose; *petals* broadly oval, an inch and a half wide, narrowed to the base, bluntish, of a rather deeper purplish rose than the sepals, very slightly undulated; *lip* narrow, slightly deflexed, two and a half inches long, the tubular portion being nearly two inches long, with the side lobes closely folded over the column, the under side of the tube yellowish, the upper side pale lilac in the basal half, dark magenta-purple at the truncate front, from the base of the throat to the mouth is clear orange-yellow, beyond which a broad line, expanding into a semicircular form, extends over the base of the front lobe; the latter is transversely oblong, deeply emarginate, rich purple-magenta, this colour breaking off suddenly near the mouth of the tube—the lip, therefore, has the front lobe broader than long, and is remarkable for the transverse disposition both of its form and colouring. *Column* white, about an inch long, semiterete, slightly winged, the cap pale magenta.

Cattleya Brymeriana, *Reichenbach fil.*, in *Gardeners' Chronicle*, n.s., xx., 492.

We consider this one of the most beautiful species of *Cattleya* yet introduced, the colours being brilliant, and the plants producing a goodly number of flowers. It is similar in its manner of growth to a short-bulbed *Lælia elegans*, and seems to us to be, not improbably, a natural hybrid. This fine novelty was introduced by Messrs. Low & Co., and has been named in honour of W. E. Brymer, Esq., M.P., Ilsington House, Dorchester. We have to thank Mr. Brymer for the material from which our drawing was taken, the product of a well-grown plant, which bloomed in September of last year under the care of Mr. Powell.

Cattleya Brymeriana is a compact-growing evergreen plant, similar in growth to *Lælia elegans*. The flowers are of medium size, the sepals and petals of a pale rosy purple, the lip narrow, with a closely folded tubular base, nearly two inches long, yellowish below, pale lilac above, the front part veined with magenta-purple above, and showing a clear yellow throat, cut off abruptly in front. It blooms during September, and lasts some time in beauty.

This will be a most useful species, as it blossoms at a time when Orchid flowers are getting scarce. Our new Cattleyas are becoming very accommodating, several of

the more recently introduced species flowering at the same time as our present subject, which makes them more especially valuable, as we already had so many Cattleyas blooming during the spring and early summer months. In fact, we are now, thanks to these acquisitions, seldom without Cattleyas in flower. The energetic collectors who obtain them deserve our warmest thanks and the fullest encouragement for what they have done. We can scarcely doubt but that many more prizes will yet be found for them to introduce to the enrichment of our Orchid houses.

Cattleya Brymeriana requires the temperature of the Cattleya house, and should be kept at the warmest end, and grown in a basket or pot with rough fibrous peat, and good drainage. It should be placed as near the glass as possible, for we find these plants require all the light we can secure to them, in order to ripen their pseudobulbs. Our sunny periods are so short, that much vigilance is required to make the most of every available agency to keep them in vigorous health, and no time or opportunity should therefore be lost in securing for them all the light they require. Good sweet material must be kept about their roots, and sufficient moisture to keep them in a plump state must always be applied. The roots must not be injured in potting, which operation should be effected just as they are starting to make their new buds.

Insects should always be kept under, and never allowed to predominate, as they injure the plants and spoil their appearance. Bad or disfigured foliage takes a large percentage off the value of any specimen.

Masdevallia Chimæra and M. Roezlii rubrum.—W. Vanner, Esq., of Chislehurst, has been kind enough to forward to us, for figuring, splendid examples of the flowers of the above distinct *Masdevallias*. The flower of *M. Chimæra* was very large, extending seventeen inches from tip to tip; the ground colour was pale buff-yellow, heavily spotted with purplish brown, the tails were deep purplish brown, and the lip a dull reddish brown, the whole surface of the flower being covered with prominent yellow hairs. *M. Roezlii rubrum* is a species of great beauty, and is very rare; it belongs to the Chimæra section, but the flowers are more triangular in shape; in this the tails were thirteen inches long from tip to tip; the ground colour of the flower was creamy yellow, heavily marked with reddish purple, the whole surface being covered with hairs of the same reddish purple hue.—B. S. W.

BATEMANNIA WALLISII MAJOR.

BATEMANNIA WALLISII MAJOR.

[Plate 185.]

Native of Costa Rica.

Epiphytal. *Rhizome* creeping, furnished with acaulescent fascicles of foliage, from the basal portion of which roots are emitted. *Leaves* ligulate acute, somewhat nervose, numerous, distichous, equitant, folded at the base, eight to ten inches long. *Scape* six inches long, stoutish, with an ovate bract shortly sheathing at the base, and accompanied by a smaller linear one. *Flowers* fully five-and-a-half inches from the tip of dorsal to tip of lateral sepal; *dorsal sepal* ovate lanceolate, drawn out into an acuminate apex, two-and-a-half inches long, fleshy, the apex hardened, rich reddish or chestnut-brown, white at the base where covered by the lateral sepals, the surface appearing tessellated from the presence of veins, the *lateral* ones similar in character, but slightly oblique, and united at the lower base; *petals* spreading and ascending, as large as the sepals, and of the same form, the edges wavy or revolute, reddish brown in front, white passing to yellow across the base, and having on the white ground on each side the column a central dark purple spot, through which from the base run two or three reddish veins, the whole forming a conspicuous eye to the flower; *lip* one-and-a-half inch long, stalked, ovate acuminate or trowel-shaped, appearing of a darker brown tint than the petals, owing to the numerous dark brown reticulations, the claw about one-fourth of an inch long, having in front an erect crest of numerous (40) white filamentous processes, with a narrow emarginate rim on the isthmus in front of the crest. *Column* very large and prominent, incurved, with a large roundish wing-like process on each margin below the fimbriated hood.

Batemannia Wallisii major, *Reichenbach fil.; Roezl, Orchidophile,* January, 1883, 477; *Gardeners' Chronicle,* n.s., xix., 119.

This small genus of curious-flowered Orchids is not so much cultivated as it should be, for it consists of extremely interesting plants. The treatment they require in order to keep them in a healthy condition for any length of time is not well understood, which is to be regretted, as they have nice evergreen foliage, and are free-blooming plants. They are, however, very tender as regards their foliage, and have no thick fleshy bulbs to support them, but the successive growths are formed of leaves, of which there is a kind of tuft or distichous fascicle from the lower part of which their roots proceed.

We have them thriving well on blocks of wood suspended from the roof. When grown in this way the water does not collect about their hearts, which is a great advantage, as too much moisture would cause the tender parts to decay. They like to be kept moist at the roots, which may be done by keeping live

sphagnum moss about them, the plants being placed in a warm house, but where they can be carefully shaded from the hot sun. Their foliage, being thin of texture, would get injured if too much exposed to direct sunshine. The atmosphere of the East India house we find suits the requirements of the plants in the way of climate. We have seen them thrive well in pots for a certain time, but baskets undoubtedly suit them better, provided they are grown in charcoal and a little rough fibrous peat on sphagnum moss; they must, however, be well elevated, in order that the water may pass away without becoming stagnant about them, for if stagnant moisture is allowed to accumulate about them it invites failure in this particular class of plants—the Orchids—as well as in many others. They will require all the care that can be bestowed upon them.

The specimen from which our illustration was sketched was taken from a well-grown plant in the fine collection of Sir Trevor Lawrence, Bart., M.P., of Burford Lodge, Dorking. The plant is of evergreen habit, and has lively green foliage; the flower scapes, which proceed from the axils of the leaves on opposite sides, and bear enormous flowers, have the sepals and petals of a rich chestnut-brown, white at the base, the surface taking on a tesselated appearance from the peculiar nature of the venation; and the lip is trowel-shaped, of a dark chestnut-brown, reticulated with blackish purple. The blossoms last a long time in perfection. It is a native of Costa Rica, where the temperature is high at some parts of the year, and also very moist.

These plants are propagated by dividing them just as they start to grow. Two stems or fascicles should be left at the back of the young growth. Insects should be well looked after, for if left too long on the plants serious damage will follow.

ODONTOGLOSSUM CORDATUM.

ODONTOGLOSSUM CORDATUM.

[Plate 186.]

Native of Mexico.

Epiphytal. *Pseudobulbs* oblong obtuse, compressed. *Leaves* broadly oblong, acute, shorter than the scape, channelled, six to seven inches long. *Scape* issuing from the axil of accessory leaves, bearing a distichous raceme of numerous flowers, each having a navicular acuminate bract much shorter than the ovary. *Flowers* stellately expanded, three inches and a half deep, and two-and-a-half inches across; *sepals* lanceolate, caudate-acuminate, the lateral ones longest, yellow, the surface almost wholly covered by transverse oblong bars of bright chestnut-brown, the extreme apex being yellow; *petals* lanceolate, shorter than the sepals, and somewhat broader near the base, caudate-acuminate at the apex, yellow, marked almost throughout with roundish blotches of bright chestnut-brown, the apex entirely brown, the spots smaller near the base; *lip* cordate, very much acuminated, entire, the median line from base to apex marked with more or less confluent spots of brown, and the apex entirely brown, the claw having a fleshy appendage or crest, which is bilobed in front, and at the base furnished with a tooth on each side. *Column* pale green, clavate, somewhat winged, pubescent.

Odontoglossum cordatum, *Lindley, Botanical Register*, 1838, misc. 90; *Knowles and Westcott, Floral Cabinet*, t. 100; *Pescatorea*, t. 26; *Paxton, Magazine of Botany*, xiii., 147, with tab.; *Botanical Magazine*, t. 4878 (as maculatum); *Bateman, 2nd Century of Orchidaceous Plants*, t. 167; *Id., Monograph of Odontoglossum*, t. 25; *Gartenflora*, t. 356.

We here introduce to our readers one of the oldest of Odontoglots, but it is one of a very distinct character, which should find a home in every collection, its curiously spotted flowers, and its cordate lip, being pleasing in character. There are several varieties of this species known in cultivation, but that which we have before us is a really good form, being a free grower, and being also free in producing its long racemes of flowers, which afford a good contrast when grown amongst our more showy kinds. Our illustration was taken from a plant in the collection of A. Sillem, Esq., Lawrie Park, Sydenham, to whom we owe our obligations for the opportunity of making the drawing, and in whose collection we have seen some fine and rare Orchids in bloom at different times under the care of Mr. Billiard, who is Mr. Sillem's gardener.

The *Odontoglossum cordatum* we have figured is a compact-habited evergreen plant, which grows about ten inches in height, and which has light green foliage. The floral racemes are produced very freely, and the flowers are gaily coloured, the sepals and petals being of a pale yellow, heavily spotted and barred with chestnut-

brown, while the acutely heart-shaped lip is white, blotched with the same chestnut-brown colour. It blooms during the spring months, and continues in beauty for about six weeks.

It is one of the Mexican species, and requires cool treatment, such as is given to *Odontoglossum crispum (Alexandræ)*, and other cool house Orchids.

It is very easily cultivated, which makes it a boon to cultivators. It is also a cheap plant, and can be bought for a few shillings. In its growth it much resembles *Odontoglossum maculatum*, which is often taken for it at certain periods of ts growth, but which, when in flower, has a very different appearance.

Grand Exhibition of Orchids, &c., at Holloway.—It is our intention to hold, during the months of May and June, in the Victoria and Paradise Nurseries, a large Exhibition of Orchids, as well as a General Exhibition of choice Stove and Greenhouse Flowering and Foliage Plants, to which all persons interested in Horticulture are respectfully invited. The Exhibition will be opened to the public on the 11th of May, and will be on view daily until June 30th, from 9 A.M. till dusk.

A large Show House, 100 feet long by 22 feet wide, and an Odontoglossum House, 80 feet long, will be specially devoted to the Orchid Exhibition, and visitors may rely upon seeing these beautiful plants with the greatest degree of comfort, the ventilation and means of ingress and egress, as well as the great width of the paths, being all that can be desired. The other Show Houses will be gay with our large collections of Stove and Greenhouse Flowering and Foliage Plants, which have figured at the leading Shows, both at home and abroad, for many years with uninterrupted success. In addition, the large Winter Garden, 100 feet long by 40 feet wide, will be filled with a fine show of Foliage and Flowering Plants, and will form an agreeable lounge to those wishing to avail themselves of this cool retreat.

. Newman, del. et lith.

DENDROBIUM PHALÆNOPSIS.

DENDROBIUM PHALÆNOPSIS.

[Plate 187.]

Native of North Australia.

Epiphytal. *Stems* erect, slender, terete contracted below, one-and-a-half to two feet long. *Leaves* five inches long, chiefly produced near the apex of the stem, distichous, lanceolate, the apex obliquely acute, the base sheathing. *Peduncles* terminal, erect, ten inches long, supporting a raceme of about fifteen blossoms. *Flowers* large, two-and-a-half to three inches across, brilliantly coloured; *dorsal sepal* oblong mucronulate from a wide base, magenta at the edges, whitish down the centre; *lateral sepals* ovate pointed, broad and laterally produced at the base, so as to form a short stout chin, and having also a spur nearly half an inch long, mottley magenta and white, the chin and spur deep purple, otherwise the exterior of sepals almost white; *petals* well displayed and very effective, roundish ovate, cuneate at the base, one-and-a-half inch long, one-and-a-quarter inch broad, deep magenta, paler half way up the centre; *lip* inflexed from the chin, so as to sit close in between the petals, three-lobed, the basal lobes large, erect, roundish, overarching the column, deep rosy purple, the front lobe deflexed, half an inch broad, magenta with deeper veins of rosy purple, flushed with maroon over the whole surface, the throat rich maroon crimson, the veins thickened and covered with dark papillæ, and there being a pair of rounded ridges inside the chin. *Column* short, rosy, keeled at the back and broadly winged at the sides; anther-case white.

Dendrobium Phalænopsis, *Fitzgerald*, *Gardeners' Chronicle*, n.s., xiv., 38.

We are delighted to be able to place in our *Album* a figure of one of the most beautiful of Dendrobes, belonging to the bigibbum section, and which we consider to be one of the best introductions of late years. It is a very rare plant, of which we have only seen two examples in blossom, one of which is the original of our present illustration, the drawing for which was taken from a specimen in the fine collection of W. Lee, Esq., Downside, Leatherhead, where it bloomed in the autumn of last year, under the care of Mr. Woolford.

This *Dendrobium Phalænopsis* is partly evergreen. The flowers are similar in form to those of *D. bigibbum*, although much larger, as will be seen by a comparison of our present figure with that of *D. bigibbum* in our first volume (Plate 28). It produces numerous flowers in an upright terminal raceme, the flowers being bold in character, the sepals of a pale magenta, with a whitish centre, the petals of a warm magenta-purple, and the lip rich rosy purple, with maroon-crimson veins. It flowers during the spring months, and remains some time in beauty.

The North Australian species, including *Dendrobium superbiens*, *D. Goldiei*, and *D. bigibbum*, all approve of the same treatment. We find them all to do best in a warm house, with all the light possible, very little shade to be given excepting during the hottest part of the day, when they must be kept free from scorching heat. Ample directions as to their growth and treatment will be found in our first volume under Plate 28, where we have given full particulars of the treatment of this class of Dendrobes. We are still of the opinion then expressed, to the effect, that although some growers pronounce them difficult of cultivation, we do not find them to be so, as, with us, every small piece makes a good plant, that will bloom freely under the treatment there recommended.

They are propagated by producing young plants on the old growths, which can be taken off when they are matured, and put on blocks, or in small pans or baskets, where they soon grow on into flowering plants.

Orchid Conference.—We have received the Programme of the Orchid Exhibition and Conference, to be held at South Kensington on May 12th and 13th, and reproduce it for the benefit of those of our subscribers who may think of exhibiting.

The Exhibition, open to Fellows at Noon May 12th, and 10 A.M. May 13th.

Class I.—Collections of Orchids in flower.

With a view to economy of space, Exhibitors are requested to show as few duplicates as possible.

Class II.—Species and varieties of the following genera:—

1. *Cattleya* and *Lælia*.
2. *Odontoglossum*.
3. *Masdevallia*.
4. *Cypripedium*.

Class III.—Species and varieties of the following genera:—

1. *Oncidium*.
2. *Epidendrum*.
3. *Dendrobium*.
4. *Vanda*, *Saccolabium*, *Aërides*, and *Stanhopea*.

Class IV.—Single plants of any Orchid.

Class V.—Hybrid Orchids, *i.e.*, those raised by cross fertilisation.

It is hoped that the parents will be shown, if possible, with the hybrid.

Class VI.—Orchids in fruit.

Class VII.—

1. Orchids indigenous to Great Britain.
2. Hardy Orchids from any other countries.
3. Cut flowers of Orchids.

In order to ensure uniformity and accuracy, it is requested that the plants exhibited bear the labels which have been specially prepared for this Conference, and with which, through the kindness of Mr. Pollett, the Society is prepared to provide the Exhibitors. Exhibitors are requested to apply for these at the Society's Office on or before the 1st May, giving the exact name of the plants which they intend to exhibit on the accompanying Form.

Class VIII.—Materials, such as sphagnum and other mosses, peat and other soils, baskets, rafts, pots, pans, labels, &c., &c., used in the cultivation of Orchids.

Three Veitch Memorial Medals will be awarded at the Conference.

[*For continuation, see under Plate* 188.]

B S Williams Pinx.

ODONTOGLOSSUM JOSEPHINÆ.

ODONTOGLOSSUM JOSEPHINÆ.

[Plate 188.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* clustered, oblong, compressed, pale green, diphyllous. *Leaves* broadly ligulate-oblong, acute. *Scape* radical, springing from the axil of accessory leaves, tinged with reddish brown, and supporting a nodding distichous raceme of numerous flowers. *Flowers* distinct and showy, the perianth stellately spreading, about three inches in depth, and nearly as much in breadth, white suffused slightly with rose in the centre, marked with bright chocolate-red spots; *sepals* lanceolate acuminate, slightly wavy at the edge, white, with a few large oblong spots of chocolate-red in the lower half, the upper part unspotted; *petals* rather broader and shorter and also more undulated than the sepals, white, spotted with somewhat smaller and more numerous crowded spots of chocolate-red about half way up, the base marked by three parallel blunt linear-clavate bars of the same colour; *lip* with the front portion deflexed, oblong, with a cordate base, an undulated margin, and a recurved apiculate apex; the side or basal lobes are erect, longitudinally striped with chestnut-red on a whitish ground; the disk is yellow, with a crest of five or seven radiating lamellæ, with bright chestnut-red lines between, the two outer on each side flattened, obtuse and shorter, the centre one also shorter, whitish, with a club-shaped termination, the next on each side larger and deeper, forming a hollow or cavern between, bilobed vertically with four prominent points, the two upper ones rather thickened, with a smooth ridge along the top of the lamellæ, the two lower ones ending in a blunt bifurcation; the white surface of the front or principal lobe of the lip is marked with about three reddish brown spots, just in front of the crests. *Column* with two deeply toothed wings at the upper end, prominently margined with two rounded wings below, striped and blotched with reddish brown, the anther-bed brown bordered with white.

Odontoglossum Josephinæ, *Williams, Orchid Album*, iv., t. 174, in note.

This already extensive genus of Orchids is steadily increasing in numbers, and among the additions being made to it many lovely new species and varieties are continually coming under our notice. We are pleased to find that our persevering collectors are looking after these gems to enrich our collections, and they are deserving of every encouragement for doing so, as the plants are of easy cultivation, and amateurs with small houses may cultivate them at a trifling expense, as it takes but little space to grow them on into good plants. Among these novel importations valuable species and varieties are often found, many of them no doubt having originated through the natural hybridisation effected by the various insects which frequent the flowers, and carry the pollen of one to the stigma of the other.

Thus we may always be expecting to find new forms. The one we now depict is a most beautiful plant, which it may be supposed was originated in this way.

We are indebted to R. H. Measures, Esq., Woodlands, Streatham, for being enabled to figure this fine *Odontoglossum*, which is named in honour of Mr. Measures' youngest daughter, as already mentioned under Plate 174 of our present volume. It produces fine nodding plumes of lovely spotted flowers.

Odontoglossum Josephinæ is an evergreen plant, compact in its growth, forming light green pseudobulbs and foliage, and producing its fine curving racemes after the bulbs have completed their growth. The sepals and petals are blush white, beautifully spotted with reddish chocolate colour. It flowers during the winter months, and lasts six weeks in beauty. It was imported from New Grenada, and requires the same treatment as *O. crispum (Alexandræ)*. Mr. Howe, the gardener, grows it in a pot, the same as other Odontoglots, with rough fibrous peat and moss. The drainage must be good, and the material at the roots kept damp, a condition which most of these cool Orchids seem to enjoy.

Orchid Conference. [*Concluded from Plate* 167.]

Programme of the Conference, Wednesday, May 13th, at 10.30 a.m.

Introductory Remarks by the President.

1. Communication from Prof. Reichenbach.
2. Discussion on the Hybridization of Orchids. Paper by Mr. Harry James Veitch, F.L.S.
3. Discussion on the Cultivation of Orchids. Paper by Mr. James O'Brien.
4. Discussion on the Nomenclature of Orchids.

The Conference Committee have arranged for a Dinner in connection with the Conference, to take place at the "Albion," Aldersgate Street, on Tuesday, May 12th, at 6.30 for 7 o'clock precisely. Gentlemen wishing to be present are requested to send their names to W. Lee, Esq., Downside, Leatherhead, on or before Friday, May 8th.

J Nugent Fitch del. et lith

B S Williams Publ.r

CATASETUM MACROCARPUM.

CATASETUM MACROCARPUM.

[Plate 189.]

Native of Tropical South America.

Epiphytal. *Stems* oblong, fusiform, three to four inches long, with a crown of leaves at the apex. *Leaves* broadly oblong-lanceolate, acute, nervose, narrowed into a stalk-like portion, and then dilated at the base so as to sheath the stem, on which they leave annular scars when they fall away. *Scape* radical, drooping, bearing a few showy blossoms of singular form. *Flowers* of large size, stalked, fleshy in texture, at first sight suggestive of those of a *Paphinia* from the peculiar and well-marked spotting; *sepals* lanceolate acuminate, two and a half inches long, the lateral ones somewhat falcate and widely spreading, pale greenish yellow, almost entirely covered with chocolate-brown spots, the general arrangement of which is in transverse lines; *petals* oblong acuminate, nearly an inch broad, broader than the sepals, the ground colour pale greenish, spotted over like the sepals, but with rather larger spots of brown, more or less concave, turned back so as to lie parallel with the dorsal sepal; *lip* an inch and a half across, cucullate, *i.e.*, deeply hollowed into a bluntly cone-shaped form, three lobed, the lobes triangular, golden yellow inside, spotted with crimson, deep yellow, but more lightly spotted near the edge on the outer surface, the blunt apex of the cone green, and more or less spotted. *Column* ligulate, with a horn-like point, pale yellow, bearing a pair of cirrhi directed towards the lip, spotted with crimson on the outer surface.

Catasetum macrocarpum, *Richard*, in *Kunth's Synopsis*, i., 331; *Humboldt, Bonpland, and Kunth, Nova Genera et Species Plantarum*, vii., 631; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 564.

Catasetum tridentatum, *Hooker, Exotic Flora*, tt. 90, 91; *Id., Botanical Magazine*, t. 3329; *Sims, Botanical Magazine*, t. 2259.

Catasetum Claveringii, *Loddiges, Botanical Cabinet*, t. 1344.

The subject that we now propose to introduce to the pages of our *Album* is one belonging to a most peculiar genus—a genus, moreover, that is not much sought after by cultivators in general. We trust, however, that by bringing forward the accompanying beautiful representation of one of these plants the attention of our readers will be attracted towards it, and that, as a consequence, the species may become more generally known and more widely cultivated, as they well deserve to be, by others besides those growers who take an interest in almost all classes of the Orchid family. Our plate was taken from a well-grown specimen in the possession of W. McDonald, Esq., of Woodlands, Perth, whose fine collection is well known.

Catasetum macrocarpum is a deciduous plant, losing its leaves when the growth is completed. It has broadish plaited light green foliage, which grows about a foot

high, its base sheathing the erect oblong fusiform stems. The flower scape proceeds from the base of the stems at the time the plant is making its growth, and bears several large and curiously formed flowers; the sepals and petals are of a pale greenish yellow, densely spotted with reddish purple, and the lip is orange spotted with brown. It blooms in June.

The species of this genus will thrive either on blocks, in baskets, or in pots, whichever may best suit the convenience of the cultivator. In the case of basket and pot culture it is necessary to provide good drainage, and rough fibrous peat and sphagnum moss should be used as a compost. If grown on blocks some live sphagnum moss must be used about the roots. They will grow in any of the warmer houses where the heat is kept up during the year. In the growing season the atmosphere must be kept moderately moist, but when at rest merely sufficient moisture to keep the bulbs plump must be permitted. They require plenty of light, and should be grown near the glass, keeping the burning sun from their foliage. When at rest it will not hurt the plants to put them on a shelf near the light. They are propagated by dividing the stems just as the plants begin to renew their growth.

Cyrtopodium punctatum.—We have received from Mr. H. Knight, Director of the Royal Parks and Gardens belonging to His Majesty the King of the Belgians, in Brussels, two grand spikes of the old and beautiful *Cyrtopodium punctatum*, the finest we have seen for many a year. This is a noble and much neglected plant, producing large panicles of yellow flowers, densely spotted with red, and, in addition to the flowers, the inflorescence is furnished at the base of each branch with large bracts, which are marked in the same way as the flowers. We hope to figure this plant in the *Album* at some future time. When we had the pleasure of visiting the gardens at the Royal Palace of Laeken, near Brussels, in March, we were much gratified to find that His Majesty has had erected a new range of glass, some of the houses of which are exclusively devoted to Orchids.—B. S. W.

LÆLIA ANCEPS WILLI[illegible]

LÆLIA ANCEPS WILLIAMSII.

[Plate 190.]

Native of Mexico.

Epiphyte. *Pseudobulbs* ovate, compressed, angulately ribbed, monophyllous. *Leaves* oblong acute, about an inch and a half wide in the broadest central portion, channelled at the base, of a light green colour. *Scapes* terminal, about two-flowered, furnished with numerous sheathing bracts. *Flowers* large, four inches across, very chaste in their appearance, the lip alone being marked, and this only within the tube, which is yellow with red streaks; *sepals* lanceolate acute, spreading, pure white; *petals* ovate acute, about twice as broad as the sepals, pure white; *lip* three-lobed, the lateral lobes rounded and spreading, otherwise folded over the column, their sides yellowish showing indications of veins, the throat clear yellow, with numerous veins of rich crimson, of which three lie parallel on the disk, whence the yellow hue is continued on to the basal part of the front lobe, which is roundish-oblong acuminate and wavy, somewhat recurved at the tip. *Column* enclosed.

Lælia anceps Williamsii, *Sander MS.*; *Williams, Orchid Grower's Manual*, 6 ed., 353.

There is no question that certain of the *Lælias* rank amongst our finest Orchids. Many of them are remarkable and valuable from their bright colours, which vary in the different species from rosy crimson to pink and magenta, and now we have several white forms of *Lælia anceps*, which are becoming prominent. Of these white forms we were a long time with only the *L. anceps Dawsoni*, and though our collectors have been searching for years to find similar plants, they have not yet succeeded in again finding the true *L. anceps Dawsoni*. Other handsome varieties have indeed been found and flowered, and large importations have reached this country within the last few months, among which we have no doubt that there will be found many fine varieties, but nevertheless they have to be proved. The one we here figure is a very charming variety, quite distinct from *L. anceps Dawsoni* and *L. anceps Hillii*, both of which are chaste and very beautiful. Our drawing was taken from a specimen which blossomed in the Victoria and Paradise Nurseries, Upper Holloway, and was exhibited before the Royal Horticultural Society, by whom it was awarded a First Class Certificate. It was imported by Messrs. Sander & Co., of St. Albans, from whom we bought the specimen, which was then the only plant that had flowered, so that it is very rare; indeed, a plant of this variety was recently sold by auction for 90 guineas.

Lælia anceps Williamsii is a compact evergreen plant, with pseudobulbs and foliage ten inches high, of a light green colour. The flower scapes proceed from the centre or top of the bulb to the height of eighteen inches, after the growth is completed. The flowers are pure white, with the throat and crest yellow, striped with reddish brown. It blooms during the winter months, and lasts two or three weeks in beauty. As in the case of the other varieties, the plant is a native of Mexico.

It requires the same treatment as *Lælia anceps*, and should be grown in fibrous peat mixed with a few lumps of charcoal; it requires good drainage, and will do well either in a basket or pot, with a liberal supply of water in the growing season, enough being given when at rest to keep the pseudobulbs and foliage in a plump state. It should be grown as near the light as possible, with very little shade, just sufficient to keep the hottest sun from scorching the foliage. These plants must be kept free from insects; they are subject to attacks of the scale, but if well looked after the enemy will soon be dislodged, and success assured.

The Orchid Exhibition at the Victoria and Paradise Nurseries.—There is at the present time to be seen a grand exhibition of Orchids and Stove and Greenhouse Plants at the above establishment. This exhibition, which was opened to the public on May the 11th, the day before the Orchid Conference was held, will be kept open until the end of June, and has already been visited by a large company of the nobility and gentry interested in these popular plants. On entering by the large Winter Garden—which is said to be the largest of its kind in the neighbourhood of London—a grand display of Palms, Ferns, and other foliage plants is presented to view, and intermingled with these are some superb specimens of Azaleas, Rhododendrons, and other greenhouse plants in season, and the effect is most charming. The next house is the Orchid Show house, a structure 100 feet by 22 feet, of lofty dimensions, which is well ventilated and shaded, so that visitors may inspect the plants with comfort, which is not very often the case in small stuffy houses. On entering a glorious sight is presented to view. Let the reader imagine two large banks of Palms, Ferns, and choice new and rare foliage plants, one four feet wide the other eight feet wide, intersected by a spacious pathway six feet wide, amongst which Orchids from every part of the world are tastefully arranged, with graceful Ferns and foliage plants as a foreground, and he will have some idea of the beauty of this Orchidic Paradise. Some wonderful specimens are to be found in this house, for instance:—*Aërides Fieldingii*, with six drooping racemes; *Cattleya Mossiæ*, with twenty scapes; *Dendrobium moschatum cupreum*, with twenty drooping racemes; *Odontoglossum vexillarium*, with twenty-four, and *Saccolabium guttatum*, with five scapes; *Cypripedium barbatum*, with thirty flowers; *Dendrobium Jamesianum*, with forty flowers; and *Masdevallia Veitchiana*, with twenty-two of its brilliant flowers.

[*For continuation, see under Plate* 191.]

J. Nugent Fitch del. et lith.

SACCOLABIUM AMPULLACEUM.

SACCOLABIUM AMPULLACEUM.

[Plate 191.]

Native of Moulmein.

Epiphytal. *Stems* short, erect, thickly furnished with distichous leaves, equitant at the base. *Leaves* short, linear-ligulate, channelled, obliquely truncate at the apex, pale green, dotted with purple. *Peduncles* short, axillary, green, bearing dense erect racemes three to four inches long, the pedicels and ovaries pale rose-coloured, hexagonal, with minute bracts at the base. *Flowers* crowded, delicate magenta-rose, with white centre, three-fourths of an inch across, the perianth segments spreading and somewhat concave; *sepals*, the dorsal one obovate, incurved, entire, of a pleasant tint of magenta-rose, the lateral ones slightly oblique; *petals* similar to the sepals in size, form, and colour; *lip* with a pale rose-coloured blunt cylindrical spur as long as the petals, the mouth of which is white, and is produced on the front side into a linear bluntly acute lamina, which is rose-coloured like the rest of the flower; at the mouth of the tube in front are two little rounded protuberances, whilst at the back are two flatly conical erect processes; the side lobes are flat, bluntly conical, one placed on each side the tube; the spur is twice as long as the lip. *Column* short, tinted with rose, cylindrical, the stigmatic hollow occupying the whole of one side; anther case brownish yellow.

Saccolabium ampullaceum, *Lindley*, in *Wallich's Catalogue*, No. 7307; *Id.*, *Sertum Orchidaceum*, t. 17.

Saccolabium rubrum, *Lindley*, in *Wallich's Catalogue*, No. 7310; *Id.*, *Genera and Species of Orchidaceous Plants*, 222; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 884.

This small species of *Saccolabium* is one of the most distinct of its genus, and remarkable for the rich colour of its blossoms, it is also a free-blooming species, and when successfully grown will well repay the cultivator for all the trouble he has bestowed upon it. There are other small-growing species of *Saccolabium*, two of which we have already figured in the *Orchid Album*. Some of these are very beautiful, and they take up but little space, for they do well when suspended from the roof of the Orchid house; they are, indeed, such general favourites when in bloom that we are surprised not to see them more freely and more widely cultivated.

We are indebted to W. Lee, Esq., Downside, Leatherhead, for the specimen represented in our drawing, which, it may be seen, represents a plant specially well bloomed for one of so small a size, and thus serves to illustrate its free-blooming qualities.

Saccolabium ampullaceum is a dwarf evergreen plant, with dark green distichous foliage. The flowers are produced in racemes from the axils of the leaves, on opposite sides of the stem, and are of a bright rosy purple. The plant blooms in spring and summer, and lasts in beauty for three or four weeks.

It requires the same treatment as that which has been recommended for *Saccolabium curvifolium*, at Plate 107 of our third volume.

The Orchid Exhibition at the Victoria and Paradise Nurseries.

[*Concluded from Plate* 190.]

There were many fine specimens of *Lælias*, *Cattleyas*, *Odontoglossums*, *Masdevallias*, *Dendrobiums*, *Trichopilias*, *Vandas*, &c. Leaving this assemblage of gay flowers we next pass through the Fern House, where are some fine examples of cultivation. Then come the Cattleya houses, which are gay with flower, and contain many fine specimens bearing buds, which when expanded will be transferred to the Show House. Following this are—a large Stove, in which are some noble examples of fine foliage plants from the South Sea Islands, New Grenada, &c.; the New Holland house, which is gay with small and large specimens of *Erica*, *Genetyllis*, *Phænocoma*, *Aphelexis*, &c.; and the Amaryllis house, in which, although it is late in the season, many hundreds of Amaryllis may be seen in blossom and bud. After this the visitor comes to a long range devoted to cool Orchids, in which there are some fine hybrids, as well as species and varieties of *Odontoglossum* in flower, intermixed with Ferns and *Masdevallias*, which latter, mingled with the white spikes of *O. crispum* and *O. Pescatorei*, have a charming effect.—M.

Cattleya Dowiana.—We have had sent to us, from R. B. White, Esq., Arddarroch, Garelochead, Dumbartonshire, a grand variety of this glorious Orchid. The lip was remarkably fine and well marked, but the peculiarity of the variety was manifested in the handsome way in which the petals as well as the sepals were marked between the veins with bright rosy purple, giving the flower a most unique appearance, and making it quite a distinct and novel form.—H. W.

J.Nugent Fitch del. et lith.

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ONCIDIUM VARICOSUM.

ONCIDIUM VARICOSUM.

[Plate 192.]

Native of Brazil.

Epiphytal. *Pseudobulbs* ovate-oblong subtetragonal, ribbed, diphyllous. *Leaves* ligulate-lanceolate, with a bluntish point, keeled behind, of firm texture. *Scape* radical, stout, glaucous, three feet long, bearing a large panicle of numerous long-stalked distant flowers—often from eighty to ninety together. *Flowers* large, showy, the broad flat expanded lip clear bright yellow; *sepals* small, oblong-acute, incurved, the lateral ones cuneate and bilobed, and as well as the equally small reflexed obovate *petals* pallid dingy green, banded with dull brown; *lip* large, clawed, sub-rotund, or transversely reniform, obsoletely four-lobed, nearly an inch and a-half across, with two ovate lateral ears which are somewhat crenate in front, the disk bearing a crest which consists of two triple teeth, one before the other, and which has a little ring of varicose veins placed on each side of it. *Column* short, with oblong finely notched whole-coloured wings.

Oncidium varicosum, *Lindley, Botanical Register*, note under t. 1920; *Id., Journal of the Horticultural Society of London*, v., 143; *Id., Folia Orchidacea*, Oncidium No. 79; *Id., Paxton's Flower Garden*, i. 106; *Reichenbach fil.*, in *Walpers' Annales Botanices Systematicæ*, vi., 738.

The Oncids form a very numerous family, many of the members of which bear remarkably showy flowers. The one of which we now treat is a very abundant blooming species, producing its branching graceful panicles of yellow flowers most freely, and these, when suspended from the roof, as we have seen them, have a splendid appearance especially if intermixed with other colours. There are several other species that are similar to this in habit and also in the flowers, and other desirable kinds which differ in the brightness of their colours. Our drawing was taken from a fine plant grown by Mr. R. Bullen, in the collection of the Botanic Gardens, Glasgow, where there is a fine range of glass houses. Mr. Bullen is known to be one of our best Orchid cultivators, and some years ago, before removing to Glasgow, he was the winner of some of the leading Orchid prizes at our London shows.

Oncidium varicosum is an evergreen species, with ovate-oblong pseudobulbs and light green foliage. The flowers are produced in panicles, and have a broad flat branching reniform lip of a bright golden yellow colour, and small sepals and petals of a pale green veined with brown. It blooms during autumn and winter, and lasts a considerable time in flower. The plant is a native of Brazil.

This is a very remarkable species, on account of its free-blooming qualities, combined with the small size of its pseudobulbs. The quantity of flowers seems out of proportion to the vigour of the plant, and it sometimes happens that the development of this abundance of blossom has a tendency to exhaust the bulbs. As a consequence this species requires special attention by giving it more moisture after the flowering season is over; the bulbs must on no account be allowed to shrivel, which they are apt to do when weakened by over-flowering. No doubt many plants are lost through their requirements not being met, but this could easily be avoided by attention to a few facts that are of more importance than most growers imagine. We find this Oncid to do well in pans or in baskets suspended from the roof. The materials we use for compost are rough fibrous peat and sphagnum moss, over good drainage, and we mix charcoal with the other materials. The plants should have plenty of moisture at the roots when in vigorous growth; in fact, they should never be allowed to get dry, but moisture must always be kept about them. They thrive well in the Cattleya house, with plenty of light, so that the growths may be strong. Mr. Bullen gives them all the light possible, by suspending them near the glass.

The Orchid Conference.—There was a large gathering of plants at this important meeting, and some very interesting species and varieties were shown, principally by the leading amateurs in the South of England. There was scarcely anything from the Midland Counties and the North of England and Scotland; the Trade, also, was not largely represented, but, considering that there were no prizes offered, it was a good show. There were about seventeen good collections exhibited, the largest of which were those of Sir T. Lawrence, Bart., M.P.; W. Lee, Esq., Leatherhead; Baron Schröder, Staines; W. E. Brymer, Esq., M.P., Dorchester; The Duke of Devonshire, Chatsworth; C. Neville Wyatt, Esq., Cheltenham; S. Courtauld, Esq., Braintree; Dr. Duke, Lewisham; J. Southgate, Esq., Streatham; J. T. Peacock, Esq., Hammersmith; and H. M. Pollett, Esq., Bickley. Amongst these were some rare and interesting specimens. There was also a large number of plants entered for Certificates, and the following were considered by the Floral Committee to which they were submitted as worthy of that distinction:—

For *Lüddemannia Pescatorei*, to Sir T. Lawrence, Bart., M.P.

For *Odontoglossum crispum Sanderiana* and *O. crispum Veitchianum*, two finely marked varieties; *O. excellens*, a supposed natural hybrid between *O. triumphans* and *O. Pescatorei*; *Cypripedium Godefroyæ*, and *Maxillaria Sanderiana*, to Baron Schröder.

For *Odontoglossum crispum Cooksoni*, to N. Cookson, Esq.

For *Cypripedium Godefroyæ*, to W. Lee, Esq.

For *Masdevallia Harryana lateritia*, to Mr. B. S. Williams.

For *Cattleya Wagneri*, *C. Bluntii*, *C. speciosissima Schröderiana*, and *C. maxima Backhousiana*, to Messrs. F. Sander & Co. a H. W.